

Service
Service
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Service Manual

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1. Technical Specifications, Connections, and Chassis Overview

Index of this chapter:

- 1.1 Technical Specifications
- 1.2 Connections
- 1.3 Chassis Overview

Notes:

- Figures can deviate due to the different set executions.
- Specifications are indicative (subject to change).

1.1 Technical Specifications

1.1.1 Vision

Display type	: LCD
Screen size	: 32" (82 cm), 16:9 : 37" (94 cm), 16:9 : 42" (107 cm), 16:9
Resolution (HxV pixels)	: 32": 1366(*3)x768 : 37": 1920(*3)x1080 : 42": 1366(*3)x768
Light output (cd/m ²)	: 550
Viewing angle (HxV degrees)	: 176
Tuning system	: PLL
Colour systems	: PAL B/G, D/K, I : SECAM B/G, D/K, L/L'
Supported computer formats (60 Hz)	: 640x480 : 800x600 : 1024x768
Supported video formats	: 640x480i - 1fH : 720x576i - 1fH : 640x480p - 2fH : 720x576p - 2fH : 1920x1080i - 2fH : 1280x720p - 3fH
AV (playback only)	: NTSC, PAL, SECAM
Tuner bands	: UHF, VHF, S, Hyper

1.1.2 Sound

Sound systems	: AV stereo, : 2CS B/G, D/K : NIC. B/G, D/K, I, L/L'
Maximum power (W _{RMS})	: 2 x 15 : 2 x 12 + 1 x 24 (42PF9831/69)

1.1.3 Multimedia

Supported digital media (only in 37" and 42")	: Compact Flash I & II : Memory Stick : Microdrive : SD Card : Multi Media Card : Smart Media Card
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Supported file formats	: JPEG : MP3 : Slideshow (.alb) : DivX 3.11 and 5 (only 32PF9731D/10, 37" and 42") : MPEG1, 2 : MPEG4 (only 32PF9731D/10, 37" and 42") : XviD (only 32PF9731D/10, 37" and 42")
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USB input	: USB2.0
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Multimedia connections	: 7-in-1 Memory Card Reader (only 37" and 42")
------------------------	--

Multimedia connections (37PF9731D/10 and 42PF9731D/10)	: Ethernet-UTP5 : UPnP : WiFi (opt. ethernet-bridge)
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1.1.4 Miscellaneous

Power supply:	
- Mains voltage (V _{AC})	: 220 - 240
- Mains frequency (Hz)	: 50 / 60

Ambient conditions:	
- Temperature range (°C)	: +5 to +40
- Maximum humidity	: 90% R.H.

Power consumption (values are indicative)	
- Normal operation (W)	: 32": 163 : 37": 185 : 42": 248
- Stand-by (W)	: < 2

Dimensions (WxHxD cm)	
- 32PF9531/10 and 32PF9631D/10	: 935x516x120
- 32PF9731D/10	: 869x625x114
- 37PF9731/69 and 37PF9731D/10	: 991x707x114
- 42PF9731D/10	: 1095x764x114
- 42PF9831/69	: 1279x872x114

Weight (kg)	
- 32PF9531/10 and 32PF9631D/10	: 18.7
- 32PF9731D/10	: 20.4
- 37PF9731/69 and 37PF9731D/10	: 26
- 42PF9731D/10	: 35
- 42PF9831/69	: 38

1.2 Connections

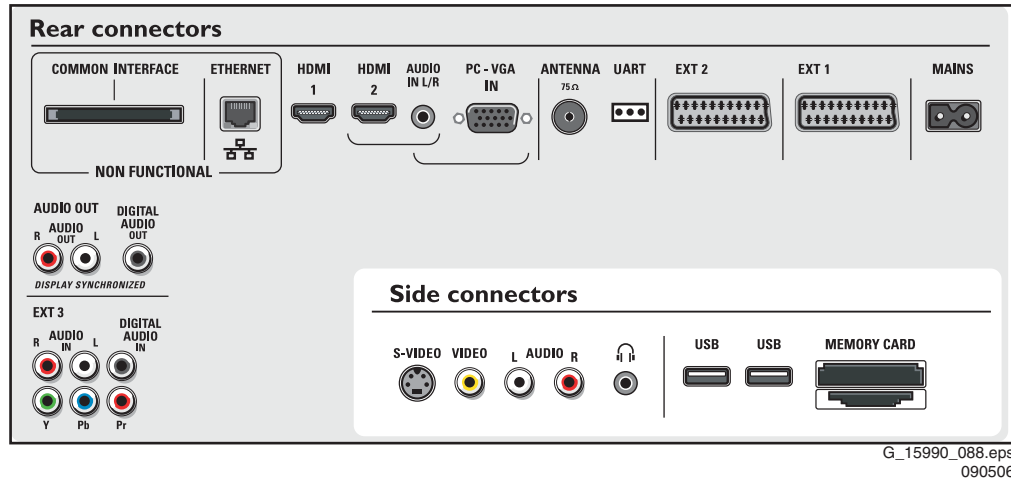


Figure 1-1 Connection overview 37PF9731/69 & 42PF9831/69

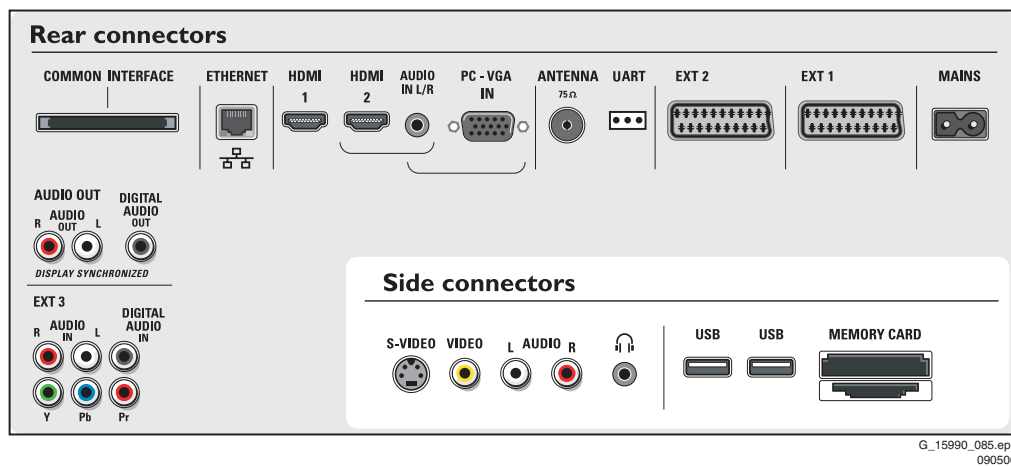


Figure 1-2 Connection overview 32PF9731D/10 & 37PF9731D/10 & 42PF9731D/10 & 42PF9831D/10

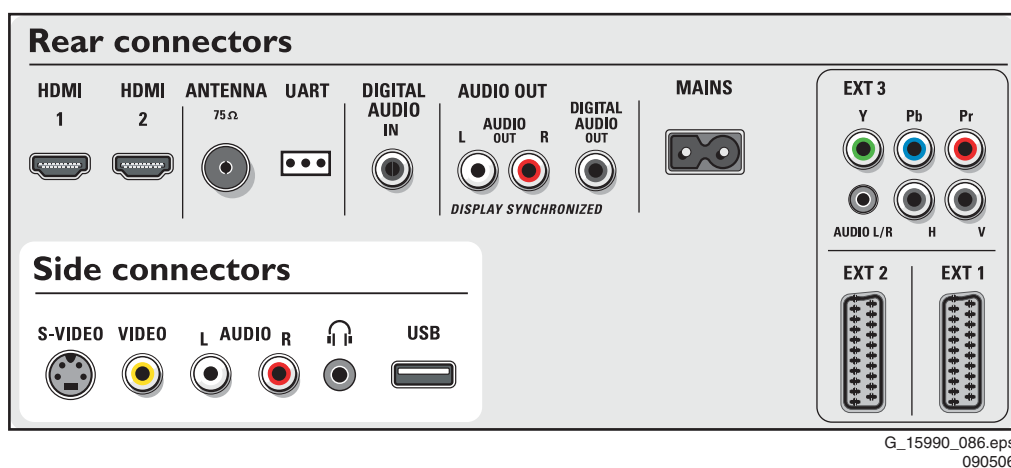


Figure 1-3 Connection overview 32PF9531/10

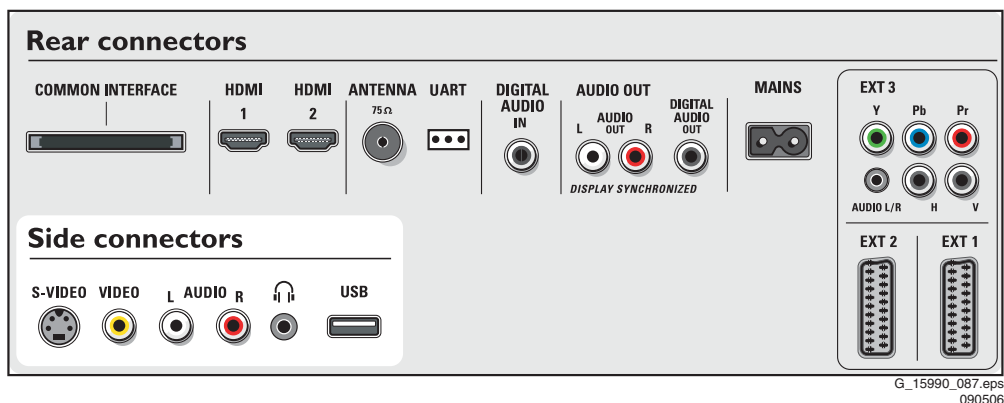


Figure 1-4 Connection overview 32PF9631D/10

Note: The following connector colour abbreviations are used (acc. to DIN/IEC 757): Bk= Black, Bu= Blue, Gn= Green, Gy= Grey, Rd= Red, Wh= White, Ye= Yellow.

6 - RD- Receive signal
7 - n.c.
8 - n.c.

1.2.1 Side Connections

Headphone (Output)

Bk - Headphone 32 - 600 ohm / 10 mW



Cinch: Video CVBS - In, Audio - In

Rd - Audio R 0.5 V_{RMS} / 10 kohm
Wh - Audio L 0.5 V_{RMS} / 10 kohm
Ye - Video CVBS 1 V_{PP} / 75 ohm

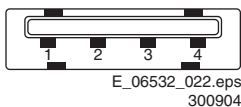


SVHS (Hosiden): Video Y/C - In

1 - Ground Y Gnd
2 - Ground C Gnd
3 - Video Y 1 V_{PP} / 75 ohm
4 - Video C 0.3 V_{PP} / 75 ohm



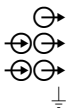
USB2.0



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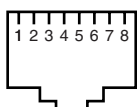
Figure 1-5 USB (type A)

1 - +5V
2 - Data (-)
3 - Data (+)
4 - Ground Gnd



1.2.2 Rear Connections

RJ45: Ethernet (if present)



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Figure 1-6 Ethernet connector

1 - TD+ Transmit signal
2 - TD- Transmit signal
3 - RD+ Receive signal
4 - n.c.
5 - n.c.



HDMI 1 & 2: Digital Video, Digital Audio - In



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Figure 1-7 HDMI (type A) connector

1 - D2+ Data channel
2 - Shield Gnd
3 - D2- Data channel
4 - D1+ Data channel
5 - Shield Gnd
6 - D1- Data channel
7 - D0+ Data channel
8 - Shield Gnd
9 - D0- Data channel
10 - CLK+ Data channel
11 - Shield Gnd
12 - CLK- Data channel
13 - n.c.
14 - n.c.
15 - DDC_SCL DDC clock
16 - DDC_SDA DDC data
17 - Ground Gnd
18 - +5V
19 - HPD Hot Plug Detect
20 - Ground Gnd

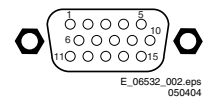


Cinch: Audio - In

Rd - Audio - R 0.5 V_{RMS} / 10 kohm
Wh - Audio - L 0.5 V_{RMS} / 10 kohm



VGA: Video RGB - In



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Figure 1-8 VGA Connector

1 - Video Red 0.7 V_{PP} / 75 ohm
2 - Video Green 0.7 V_{PP} / 75 ohm
3 - Video Blue 0.7 V_{PP} / 75 ohm
4 - n.c.
5 - Ground Gnd
6 - Ground Red Gnd
7 - Ground Green Gnd
8 - Ground Blue Gnd



9	- +5V _{DC}	+5 V	⊕
10	- Ground Sync	Gnd	⊕
11	- n.c.		
12	- DDC_SDA	DDC data	⊕
13	- H-sync	0 - 5 V	⊕
14	- V-sync	0 - 5 V	⊕
15	- DDC_SCL	DDC clock	⊕

Aerial - In

- IEC-type	Coax, 75 ohm	⊕
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EXT2: Video RGB/YC - In, CVBS - In/Out, Audio - In/Out

1	- Audio R	0.5 V _{RMS} / 1 kohm	⊕
2	- Audio R	0.5 V _{RMS} / 10 kohm	⊕
3	- Audio L	0.5 V _{RMS} / 1 kohm	⊕
4	- Ground Audio	Gnd	⊕
5	- Ground Blue	Gnd	⊕
6	- Audio L	0.5 V _{RMS} / 10 kohm	⊕
7	- Video Blue/C-out	0.7 V _{PP} / 75 ohm	⊕
8	- Function Select	0 - 2 V: INT 4.5 - 7 V: EXT 16:9 9.5 - 12 V: EXT 4:3	⊕
9	- Ground Green	Gnd	⊕
10	- Easylink P50	0 - 5 V / 4.7 kohm	⊕
11	- Video Green/Y	0.7 V _{PP} / 75 ohm	⊕
12	- n.c.		
13	- Ground Red	Gnd	⊕
14	- Ground P50	Gnd	⊕
15	- Video Red/C	0.7 V _{PP} / 75 ohm	⊕
16	- Status/FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	⊕
17	- Ground Video	Gnd	⊕
18	- Ground FBL	Gnd	⊕
19	- Video CVBS	1 V _{PP} / 75 ohm	⊕
20	- Video CVBS/Y	1 V _{PP} / 75 ohm	⊕
21	- Shield	Gnd	⊕

EXT1: Video RGB - In, CVBS - In/Out, Audio - In/Out

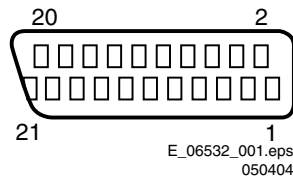


Figure 1-9 SCART connector

1	- Audio R	0.5 V _{RMS} / 1 kohm	⊕
2	- Audio R	0.5 V _{RMS} / 10 kohm	⊕
3	- Audio L	0.5 V _{RMS} / 1 kohm	⊕
4	- Ground Audio	Gnd	⊕
5	- Ground Blue	Gnd	⊕
6	- Audio L	0.5 V _{RMS} / 10 kohm	⊕
7	- Video Blue	0.7 V _{PP} / 75 ohm	⊕
8	- Function Select	0 - 2 V: INT 4.5 - 7 V: EXT 16:9 9.5 - 12 V: EXT 4:3	⊕
9	- Ground Green	Gnd	⊕
10	- Easylink P50	0 - 5 V / 4.7 kohm	⊕
11	- Video Green	0.7 V _{PP} / 75 ohm	⊕
12	- n.c.		
13	- Ground Red	Gnd	⊕
14	- Ground P50	Gnd	⊕
15	- Video Red	0.7 V _{PP} / 75 ohm	⊕
16	- Status/FBL	0 - 0.4 V: INT 1 - 3 V: EXT / 75 ohm	⊕
17	- Ground Video	Gnd	⊕
18	- Ground FBL	Gnd	⊕
19	- Video CVBS	1 V _{PP} / 75 ohm	⊕
20	- Video CVBS	1 V _{PP} / 75 ohm	⊕
21	- Shield	Gnd	⊕

Cinch: Audio - Out

Rd	- Audio - R	0.5 V _{RMS} / 10 kohm	⊕
Wh	- Audio - L	0.5 V _{RMS} / 10 kohm	⊕

Digital Audio Out: Cinch: S/PDIF - Out

Bk	- Coaxial	0.4 - 0.6V _{PP} / 75 ohm	⊕
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EXT3: Cinch: Audio - In

Rd	- Audio - R	0.5 V _{RMS} / 10 kohm	⊕
Wh	- Audio - L	0.5 V _{RMS} / 10 kohm	⊕

EXT3: Digital Audio In: Cinch: S/PDIF - In

Bk	- Coaxial	0.2 - 0.6V _{PP} / 75 ohm	⊕
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EXT3: Cinch: Video YPbPr - In

Gn	- Video Y	1 V _{PP} / 75 ohm	⊕
Bu	- Video Pb	0.7 V _{PP} / 75 ohm	⊕
Rd	- Video Pr	0.7 V _{PP} / 75 ohm	⊕

Service Connector (UART)

1	- UART_TX	Transmit	⊕
2	- Ground	Gnd	⊕
3	- UART_RX	Receive	⊕

1.3 Chassis Overview

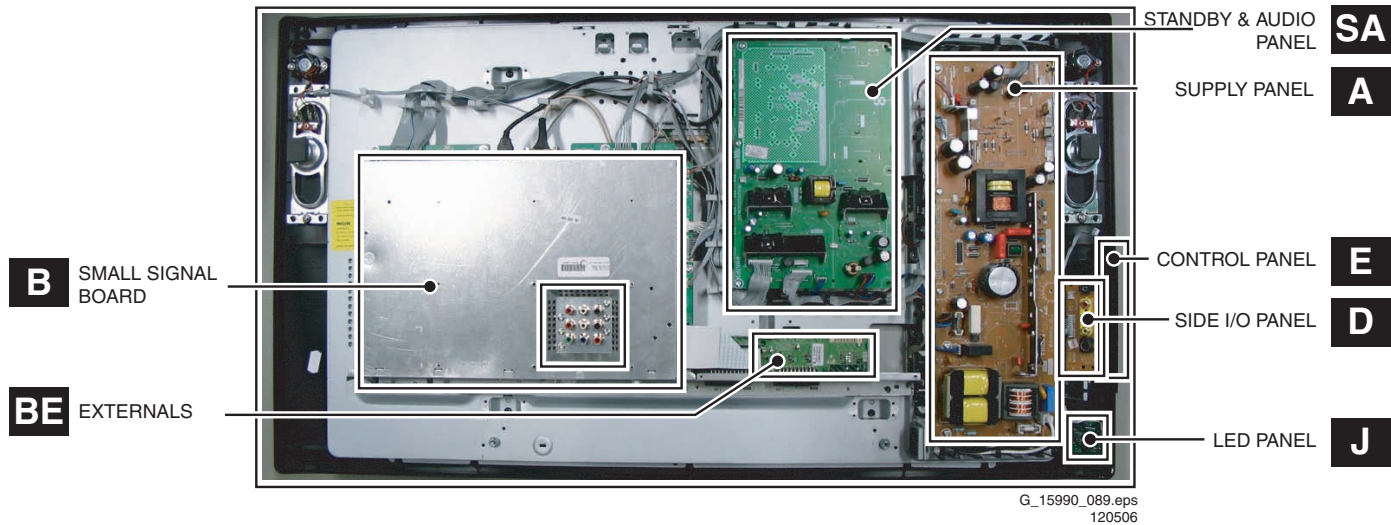


Figure 1-10 PWB/CBA locations ME6 styling (32PF9531/10 and 32PF9631D/10)

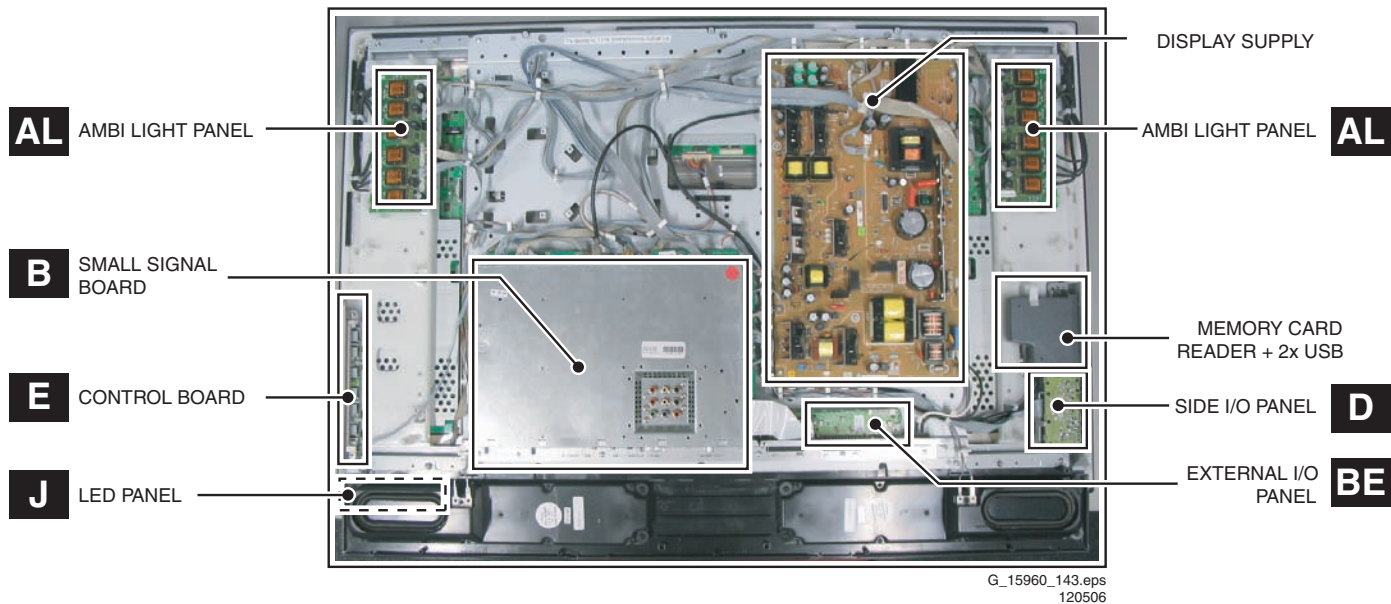


Figure 1-11 PWB/CBA locations Top B styling (32PF9731D/10, 37PF9731/69, 37PF9731D/10 and 42PF9731D/10)

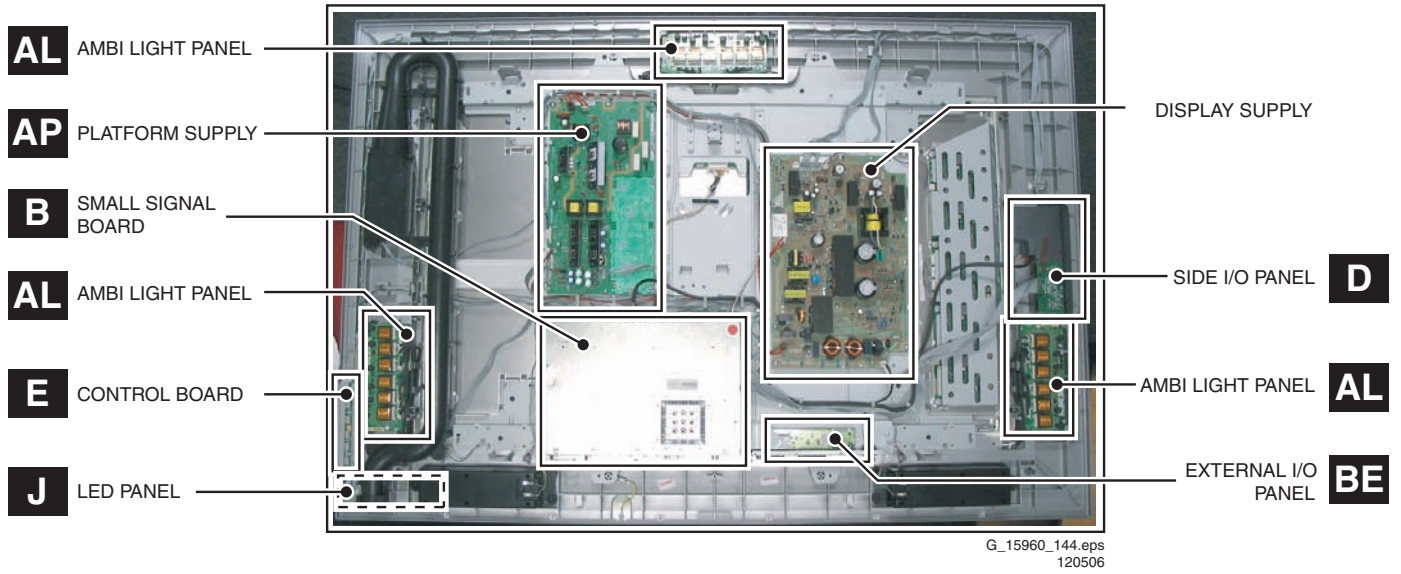


Figure 1-12 PWB/CBA locations Top A styling (42PF9831/69 and 42PF9831D/10)

2. Safety Instructions, Warnings, and Notes

Index of this chapter:

- 2.1 Safety Instructions
- 2.2 Warnings
- 2.3 Notes

2.1 Safety Instructions

Safety regulations require the following **during** a repair:

- Connect the set to the Mains/AC Power via an isolation transformer (> 800 VA).
- Replace safety components, indicated by the symbol ▲, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the Mains/AC Power lead for external damage.
- Check the strain relief of the Mains/AC Power cord for proper function.
- Check the electrical DC resistance between the Mains/AC Power plug and the secondary side (only for sets that have a Mains/AC Power isolated power supply):
 1. Unplug the Mains/AC Power cord and connect a wire between the two pins of the Mains/AC Power plug.
 2. Set the Mains/AC Power switch to the "on" position (keep the Mains/AC Power cord unplugged!).
 3. Measure the resistance value between the pins of the Mains/AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
 4. Switch "off" the set, and remove the wire between the two pins of the Mains/AC Power plug.
- Check the cabinet for defects, to prevent touching of any inner parts by the customer.

2.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ▲). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential. Available ESD protection equipment:
 - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
 - Wristband tester 4822 344 13999.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched "on".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.3 Notes

2.3.1 General

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground (⊥), or hot ground (↕), depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative. Measure them in the

Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz for PAL, or 61.25 MHz for NTSC (channel 3).

- Where necessary, measure the waveforms and voltages with (⏏) and without (⏏) aerial signal. Measure the voltages in the power supply section both in normal operation (⏏) and in stand-by (⏏). These values are indicated by means of the appropriate symbols.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
- Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the "double-D symbol", are trademarks of Dolby Laboratories.

2.3.2 Schematic Notes

- All resistor values are in ohms, and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are given in micro-farads (μ = $\times 10^{-6}$), nano-farads (n= $\times 10^{-9}$), or pico-farads (p= $\times 10^{-12}$).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed in the Spare Parts List. Therefore, always check this list when there is any doubt.

2.3.3 Rework on BGA (Ball Grid Array) ICs

General

Although (LF)BGA assembly yields are very high, there may still be a requirement for component rework. By rework, we mean the process of removing the component from the PWB and replacing it with a new component. If an (LF)BGA is removed from a PWB, the solder balls of the component are deformed drastically so the removed (LF)BGA has to be discarded.

Device Removal

As is the case with any component that, is being removed, it is essential when removing an (LF)BGA, that the board, tracks, solder lands, or surrounding components are not damaged. To remove an (LF)BGA, the board must be uniformly heated to a temperature close to the reflow soldering temperature. A uniform temperature reduces the risk of warping the PWB. To do this, we recommend that the board is heated until it is certain that all the joints are molten. Then carefully pull the component off the board with a vacuum nozzle. For the appropriate temperature profiles, see the IC data sheet.

Area Preparation

When the component has been removed, the vacant IC area must be cleaned before replacing the (LF)BGA. Removing an IC often leaves varying amounts of solder on the mounting lands. This excessive solder can be removed with either a solder sucker or solder wick. The remaining flux can be removed with a brush and cleaning agent.

After the board is properly cleaned and inspected, apply flux on the solder lands and on the connection balls of the (LF)BGA.

Note: Do not apply solder paste, as this has been shown to result in problems during re-soldering.

Device Replacement

The last step in the repair process is to solder the new component on the board. Ideally, the (LF)BGA should be aligned under a microscope or magnifying glass. If this is not possible, try to align the (LF)BGA with any board markers. So as not to damage neighbouring components, it may be necessary to reduce some temperatures and times.

More Information

For more information on how to handle BGA devices, visit this URL: www.atyourservice.ce.philips.com (needs subscription, not available for all regions). After login, select "Magazine", then go to "Repair downloads". Here you will find Information on how to deal with BGA-ICs.

2.3.4 Lead-free Solder

Philips CE is producing lead-free sets (PBF) from 1.1.2005 onwards.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 5 and 6 refer to the production year, digits 7 and 8 refer to production week (in example below it is 1991 week 18).



Figure 2-1 Serial number example

Regardless of the special lead-free logo (which is not always indicated), one must treat all sets from this date onwards according to the rules as described below.

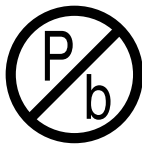


Figure 2-2 Lead-free logo

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment. In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able:
 - To reach a solder-tip temperature of at least 400°C.
 - To stabilise the adjusted temperature at the solder-tip.
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature of around 360°C - 380°C is reached and stabilised at the solder joint. Heating time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C, otherwise wear-out of tips will increase drastically and flux-fluid will be destroyed. To avoid wear-out of tips, switch "off" unused equipment or reduce heat.
- Mix of lead-free soldering tin/parts with leaded soldering tin/parts is possible but PHILIPS recommends strongly to

avoid mixed regimes. If this cannot be avoided, carefully clear the solder-joint from old tin and re-solder with new tin.

- Use only original spare-parts listed in the Service-Manuals. Not listed standard material (commodities) has to be purchased at external companies.
- Special information for lead-free BGA ICs: these ICs will be delivered in so-called "dry-packaging" to protect the IC against moisture. This packaging may only be opened shortly before it is used (soldered). Otherwise the body of the IC gets "wet" inside and during the heating time the structure of the IC will be destroyed due to high (steam-) pressure inside the body. If the packaging was opened before usage, the IC has to be heated up for some hours (around 90°C) for drying (think of ESD-protection!).
Do not re-use BGAs at all!
- For sets produced before 1.1.2005, containing leaded soldering tin and components, all needed spare parts will be available till the end of the service period. For the repair of such sets nothing changes.

In case of doubt whether the board is lead-free or not (or with mixed technologies), you can use the following method:

- Always use the highest temperature to solder, when using SAC305 (see also instructions below).
- De-solder thoroughly (clean solder joints to avoid mix of two alloys).

Caution: For BGA-ICs, you **must** use the correct temperature-profile, which is coupled to the 12NC. For an overview of these profiles, visit the website www.atyourservice.ce.philips.com (needs subscription, but is not available for all regions). You will find this and more technical information within the "Magazine", chapter "Repair downloads". For additional questions please contact your local repair help desk.

2.3.5 Alternative BOM identification

In September 2003, Philips CE introduced a change in the way the serial number (or production number, see Figure 2-1) is composed. From this date on, the **third digit** in the serial number (example: AG2B0335000001) indicates the number of the alternative BOM (Bill of Materials used for producing the specific model of TV set). It is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different O.E.M.s.

By looking at the third digit of the serial number, the service technician can see if there is more than one type of B.O.M. used in the production of the TV set he is working with. He can then consult the At Your Service Web site, where he can type in the Commercial Type Version Number of the TV set (e.g. 28PW9515/12), after which a screen will appear that gives information about the number of alternative B.O.M.s used. If the third digit of the serial number contains the number 1 (example: AG1B0335000001), then there is only one B.O.M. version of the TV set on the market. If the third digit is a 2 (example: AG2B0335000001), then there are two different B.O.M.s. **Information about this is important for ordering the correct spare parts!**

For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26 = 35 different B.O.M.s can be indicated by the third digit of the serial number.

2.3.6 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages.** While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3. Directions for Use

You can download this information from the following websites:

<http://www.philips.com/support>

<http://www.p4c.philips.com>

4. Mechanical Instructions

Index of this chapter:

- 4.1 Cable Dressing
- 4.2 Service Positions
- 4.3 Assy/Panel Removal "ME6" styling
- 4.4 Assy/Panel Removal "Top A" styling
- 4.5 Assy/Panel Removal "Top B" styling
- 4.6 Set Re-assembly

Notes:

- Figures below can deviate slightly from the actual situation, due to the different set executions.

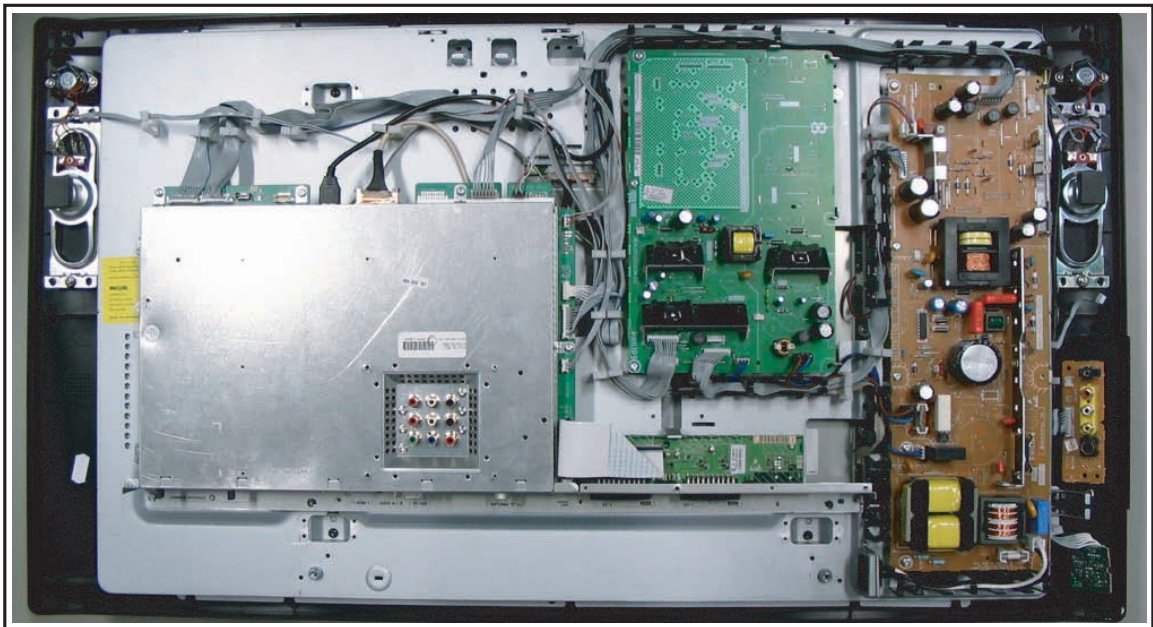
- Follow the disassemble instructions in described order.

This chassis comes with three different stylings:

- "ME6", for type numbers 32PF9531/10 and 32PF9631D/10
- "Top B", for type numbers 32PF9731D/10, 37PF9731/69, 37PF9731D/10 and 42PF9731D/10
- "Top A", for type numbers 42PF9831/69 and 42PF9831D/10.

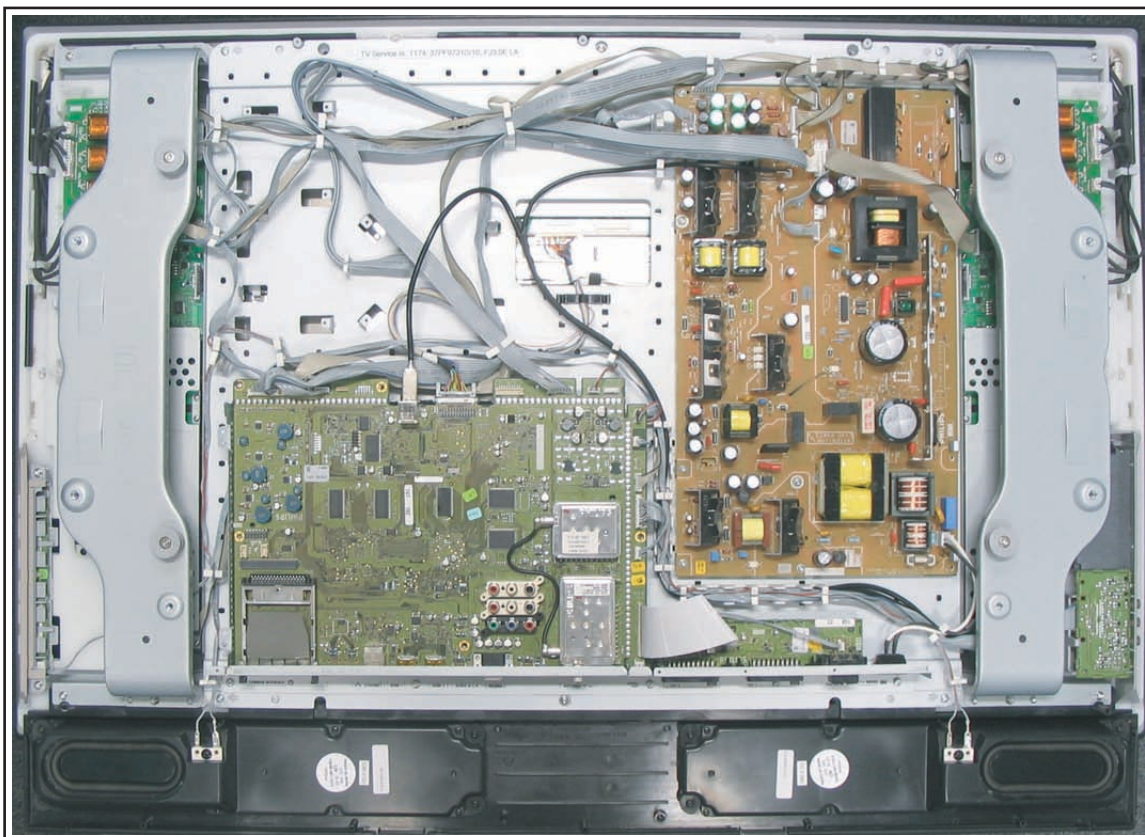
The mechanical instructions for the different stylings are described separately in this chapter.

4.1 Cable Dressing



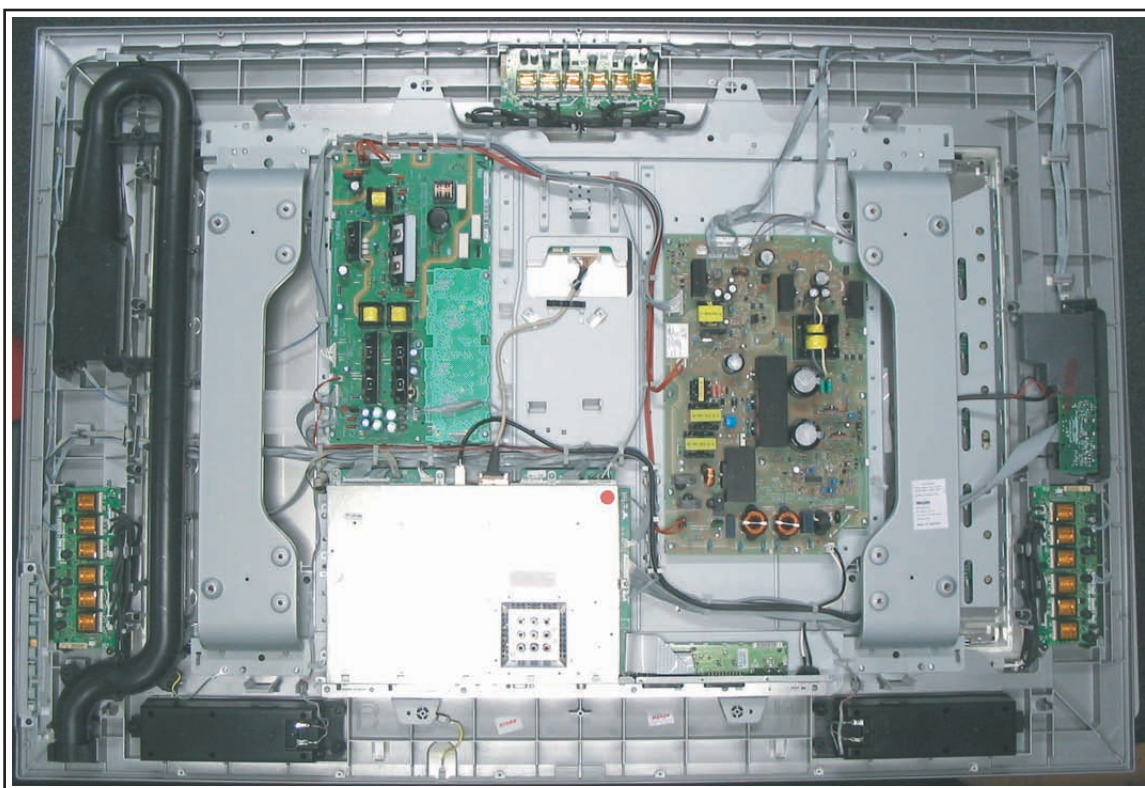
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Figure 4-1 Cable dressing ME6 styling (32PF9531/10 and 32PF9631D/10)



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Figure 4-2 Cable dressing Top B styling (32PF9731D/10, 37PF9731/69, 37PF9731D/10 and 42PF9731D/10)



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Figure 4-3 Cable dressing Top A styling (42PF9831/69 and 42PF9831D/10)

4.2 Service Positions

For easy servicing of this set, there are a few possibilities created:

- The buffers from the packaging.
- Foam bars (created for Service).
- Aluminium service stands (created for Service).

4.2.1 Foam Bars

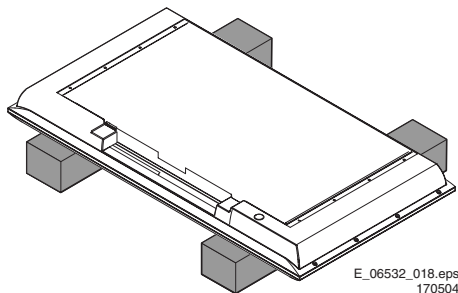


Figure 4-4 Foam bars

The foam bars (order code 3122 785 90580 for two pieces) can be used for all types and sizes of Flat TVs. By laying the TV face down on the (ESD protective) foam bars, a stable situation is created to perform measurements and alignments. By placing a mirror under the TV, you can monitor the screen.

4.2.2 Aluminium Stands

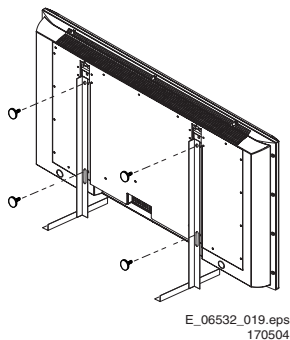


Figure 4-5 Aluminium stands (drawing of Mkl)

The new Mkl aluminium stands (not on drawing) with order code 3122 785 90690, can also be used to do measurements, alignments, and duration tests. The stands can be (dis)mounted quickly and easily by means of sliding them in/out of the "mushrooms". The new stands are backwards compatible with the earlier models.

Important: For (older) FTV sets without these "mushrooms", it is obligatory to use the provided screws, otherwise it is possible to damage parts inside the set !

4.3 Assy/Panel Removal "ME6" styling

4.3.1 Rear Cover

Disconnect the Mains/AC Power cord before you remove the rear cover!

1. Place the TV set upside down on a table top, using the foam bars (see part "Foam Bars").
Caution: do **not** put pressure on the display, but let the monitor lean on the Front cover.
2. Remove the stand by removing the tapping screws [1], that hold the stand.

3. Remove T10 tapping and parker screws [2] from the top, centre, bottom, left and right side of the Rear Cover and underneath the main I/O panel.
4. Lift the Rear Cover from the TV. Make sure that wires and flat foils are not damaged while lifting the rear cover.

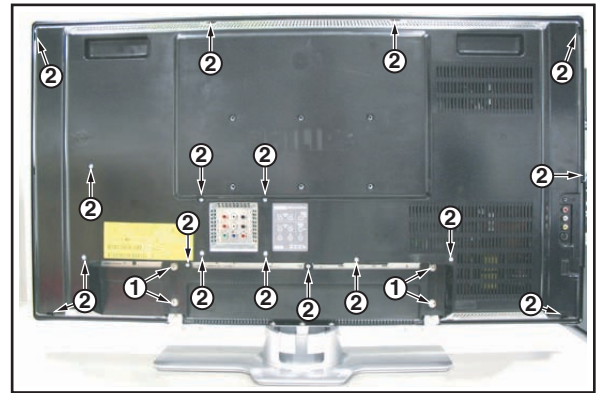


Figure 4-6 Rear cover removal

4.3.2 VESA wall plate

The VESA wall mount plate can be removed by removing the T10 tapping screws [1] that hold the plate. See figure "VESA wall mount plate removal".

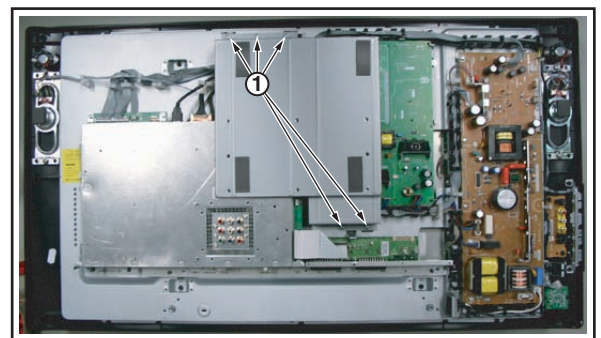


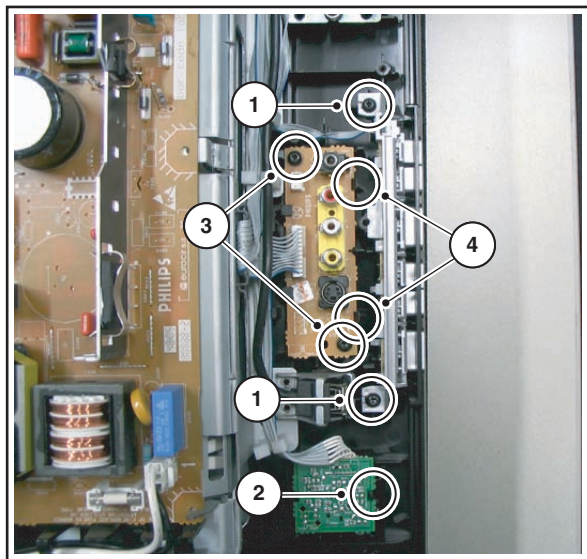
Figure 4-7 VESA wall mount plate removal

4.3.3 Speaker

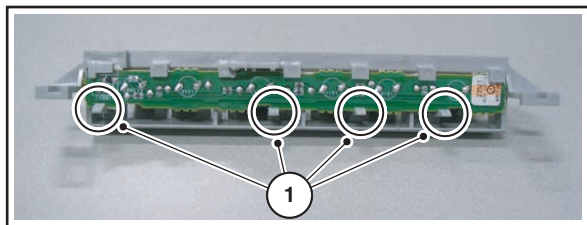
After removing the rear cover, you gain access to the speakers. **Caution:** never disconnect the speakers with a playing set, because otherwise the class-D audio amplifiers could be damaged.

4.3.4 Control Panel

The Control Panel can be taken out by removing the two T10 screws [1] that hold the plastic frame. After the panel has been taken out, the connector can be released. See figure "Control Panel, LED Panel and Side I/O Panel removal". When defective, replace the whole unit.

G_15990_093.eps
090506**Figure 4-8 Control panel, LED panel and side I/O panel removal**

The assy is packed into a plastic frame. To take the assy out, lift the four clamps [1] of the frame and take the assy out. See Figure "Control panel assy removal".

G_15990_094.eps
090506**Figure 4-9 Control panel assy removal**

When defective, replace the whole unit.

4.3.5 LED Panel

The LED Panel can be removed by releasing clamp [2] that holds the assy. It hinges on the left side. See figure "Control Panel, LED Panel and Side I/O Panel removal".

When defective, replace the whole unit.

4.3.6 Side I/O Panel

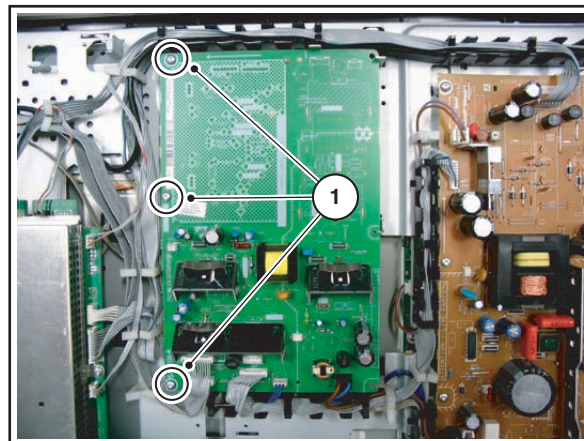
The Side I/O Panel can be removed together with its plastic frame. See figure "Control Panel, LED Panel and Side I/O Panel removal".

1. Remove the T10 parker screws [3].
2. Push back the clamps [4] on the right side that hold the assy.
3. Take out the assy from the plastic frame, it hinges on the left side.

When defective, replace the whole unit.

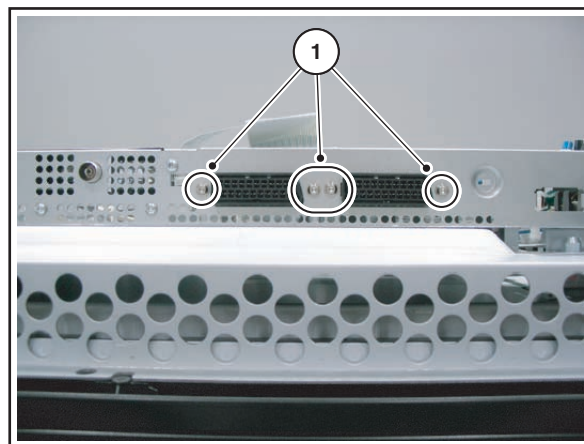
4.3.7 Stand-by/Audio Panel

1. Disconnect all cables from the Stand-by/Audio Panel.
2. Remove T10 tapping screws [1] from the Stand-by/Audio Panel. See figure "Stand-by/Audio Panel removal".
3. Take out the Stand-by/Audio Panel (it hinges at the right side).

G_15990_095.eps
090506**Figure 4-10 Stand-by/Audio panel removal**

4.3.8 External I/O SCART Panel

The External I/O SCART Panel can be taken out by removing the flat cable and removing the parker screws [1] on the SSB bottom shield that hold the assy. See figure "External I/O SCART Panel removal".

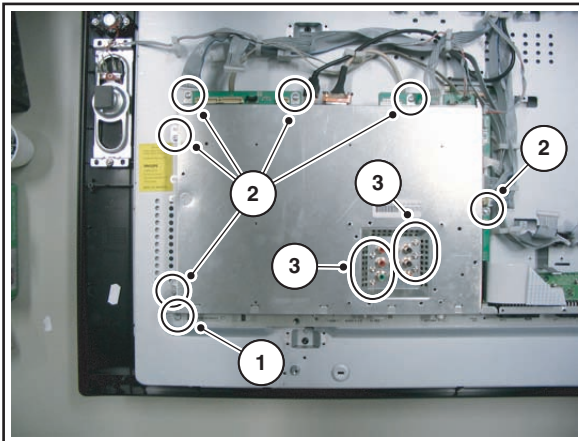
G_15990_096.eps
090506**Figure 4-11 External I/O SCART panel**

4.3.9 Small Signal Board (SSB)

Caution: it is absolutely mandatory to remount all different screws at their original position during re-assembly. Failure to do so may result in damaging the SSB.

Removal from the set

The SSB can, together with the External I/O SCART Panel, be taken out of the set by removing the T10 tapping screw [1] on the left side of the panel. See "SSB top shielding". The frame that holds the SSB and the External I/O SCART Panel hinges at the right side. Disconnect all cables from the SSB before lifting the frame from the set. This includes the USB plug and the fragile LVDS cable.

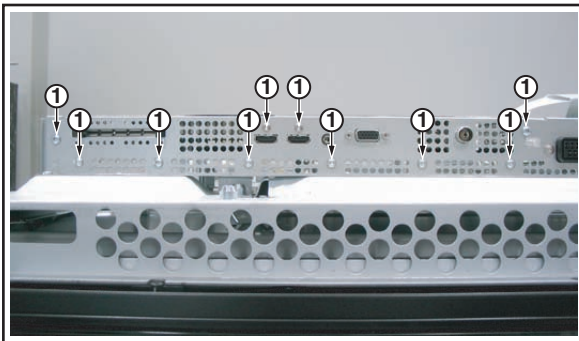


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Figure 4-12 SSB top shielding

Removing the shielding

1. Remove the T10 tapping screws [2] on the outer rim of the SSB top shielding.
2. Remove the T10 parker screws [3] around the External I/O SCART Panel.
3. Remove the T10 tapping screws [1] on the SSB bottom shielding. See figure “SSB bottom shielding” for details.



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Figure 4-13 SSB bottom shielding

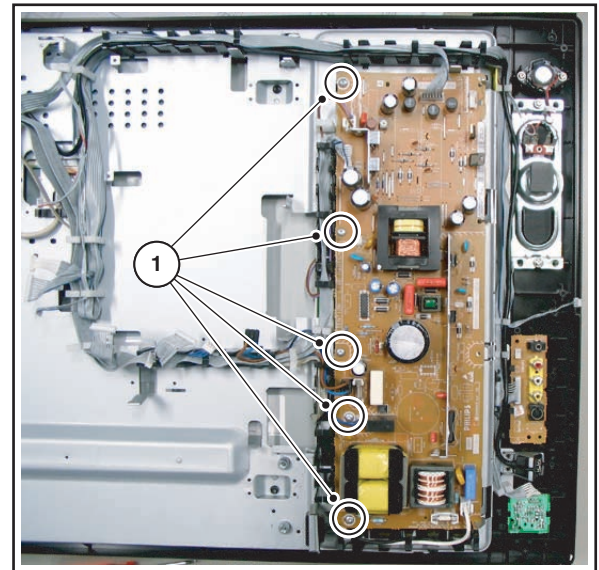
Removing the SSB and External I/O Panel

See figure “SSB and External I/O SCART Panel removal”.

- The SSB is mounted with 2 screws on the bottom shielding.
- The External I/O Panel is mounted with 4 screws on the bottom shielding.

4.3.10 Supply Panel

See figure “Supply Panel” for details.



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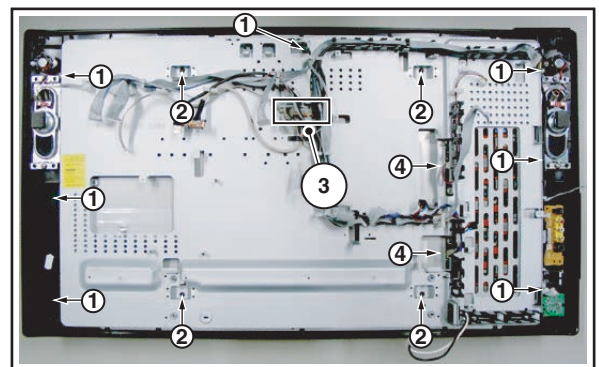
Figure 4-14 Supply panel

1. Remove the T10 tapping screws.
2. Unplug the cables.
3. Take the panel out (it hinges on the right side).

4.3.11 LCD Display Panel

For exchanging the LCD display, see figure “LCD Display Panel removal”.

1. Remove T10 parker screws [1], indicated with an arrow on the rim.
2. Remove T15 tapping screws [2].
3. Unplug the speaker cables.
4. Unplug the fragile LVDS connector.
5. Unplug the two connectors [4] on the LCD inverter panel.



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Figure 4-15 LCD display panel removal

Now the subframe can be lifted, together with the Side I/O-, Side USB- and LED Panel. See figure “Subframe lift”. After that, the LCD Panel can be lifted from the set.

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Figure 4-16 Subframe lift

4.4 Assy/Panel Removal "Top A" styling

4.4.1 Rear Cover

Disconnect the Mains/AC Power cord before you remove the rear cover!

1. Place the TV set upside down on a table top, using the foam bars (see part "Foam Bars").
Caution: do **not** put pressure on the display, but let the monitor lean on the front cover.
2. Remove the stand.
3. Remove mushrooms [1].
4. Remove screws [2].
5. Lift the Rear Cover from the TV. Make sure that wires and flat foils are not damaged while lifting the rear cover.

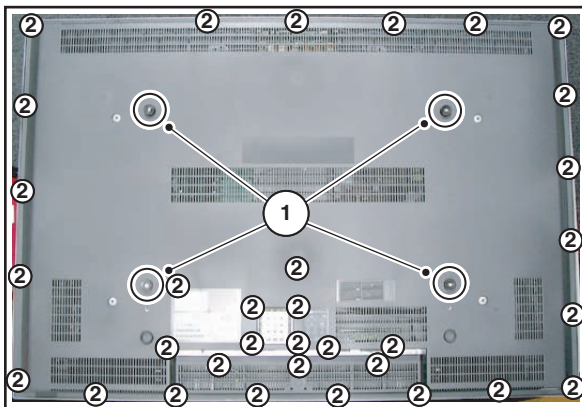
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Figure 4-17 Rear cover removal

4.4.2 Speakers

After removing the rear cover, you gain access to the speakers.
Caution: never disconnect the speakers with a playing set, because otherwise the class-D audio amplifiers could be damaged.

4.4.3 Key Control Panel

1. Remove the rear cover, as described previously.
2. Remove screws [1].

3. Release clips [2] and slide the unit away from the side of the set.
4. Release clips [3] and slide the PWB out of the plastic casing.
5. Unplug connector [4].

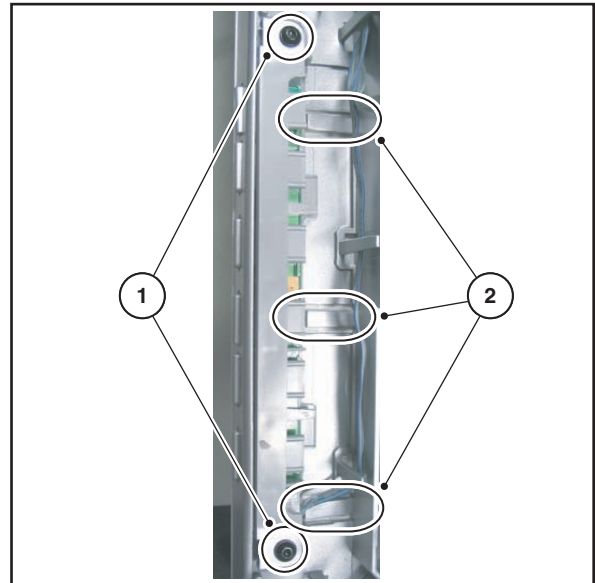
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Figure 4-18 Key control panel removal 1/2

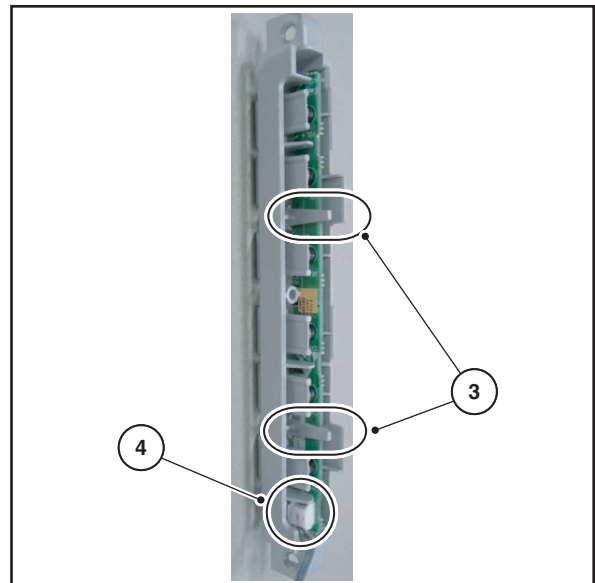
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Figure 4-19 Key control panel removal 2/2

When defective, replace the whole unit.

4.4.4 Side I/O Panel

1. Remove the rear cover, as described previously.
2. Release clamp [1] and slide the PWB out of its casing.
3. Unplug connector [2] from the panel.

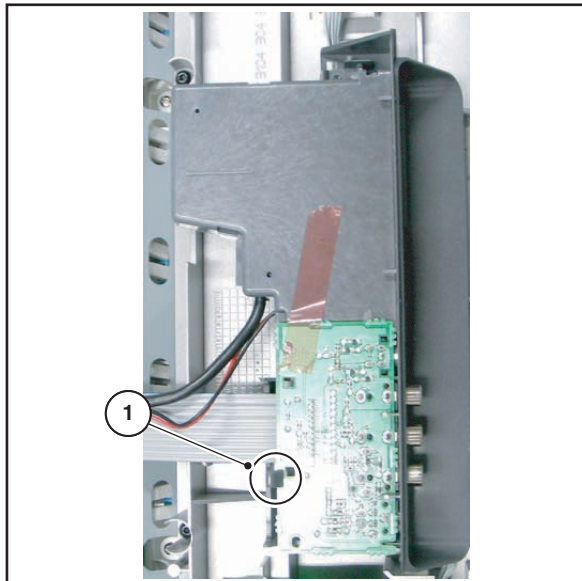
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Figure 4-20 Side I/O panel 1/2

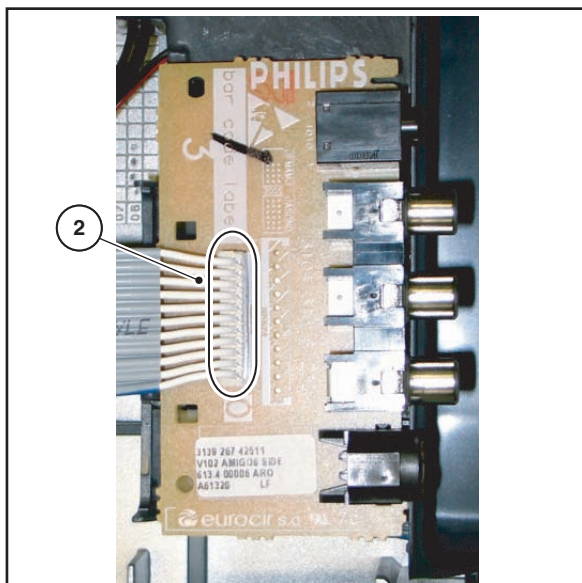
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Figure 4-21 Side I/O panel 2/2

4.4.5 Memory Card reader / USB connector

1. Remove the rear cover, as described previously.
2. Release clamps [1] and slide the unit out of its plastic frame.
3. Unplug the USB connector from the SSB panel, and the power cable from the platform PSU.

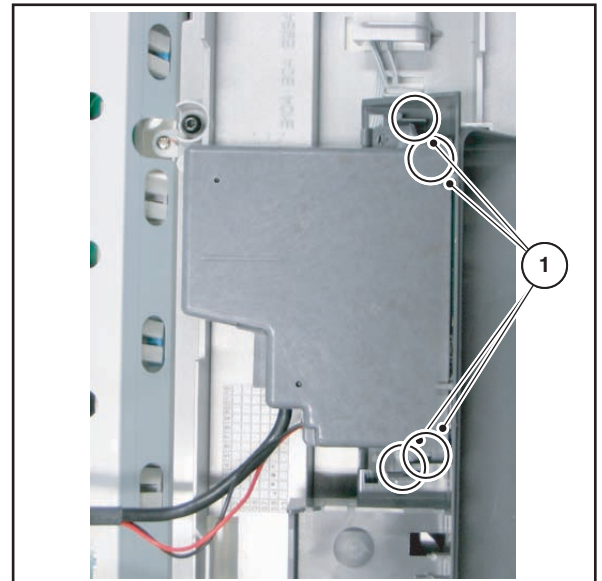
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Figure 4-22 Memory card reader / USB connector

4.4.6 External I/O SCART Panel

1. Remove the rear cover, as described previously.
2. Unplug connector [1] from the panel.
3. Remove screws [2].

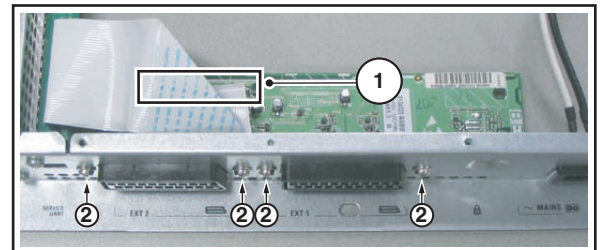
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Figure 4-23 External I/O SCART panel

4.4.7 Small Signal Board (SSB)

Caution: it is absolutely mandatory to remount all different screws at their original position during re-assembly. Failure to do so may result in damaging the SSB.

Removal from the set

1. Remove the rear cover, as described previously.
2. Unplug connector [1] from the panel PSU.
3. Unplug all connectors [2] from the SSB panel.
4. Remove screws [3].
5. Take the complete SSB module out of the set and place it on a flat workbench.

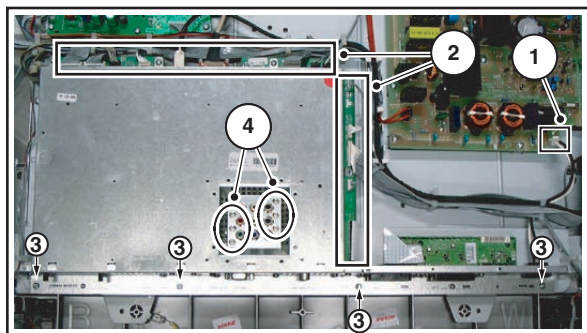
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Figure 4-24 SSB panel 1/3

Removing the shielding

1. Remove screws [4] .
2. Remove the connector plate and the top shielding.
3. Remove screws [5] and remove the SSB panel from the bottom shielding.

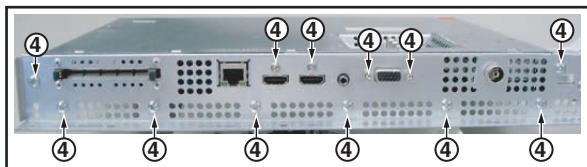
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Figure 4-25 SSB panel 2/3

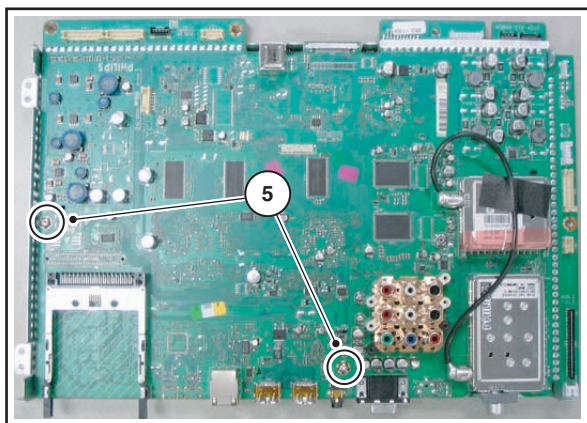
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Figure 4-26 SSB panel 3/3

4.4.8 Platform Supply

1. Remove the rear cover, as described previously.
2. Unplug connectors [1] from the panel.
3. Remove screws [2].

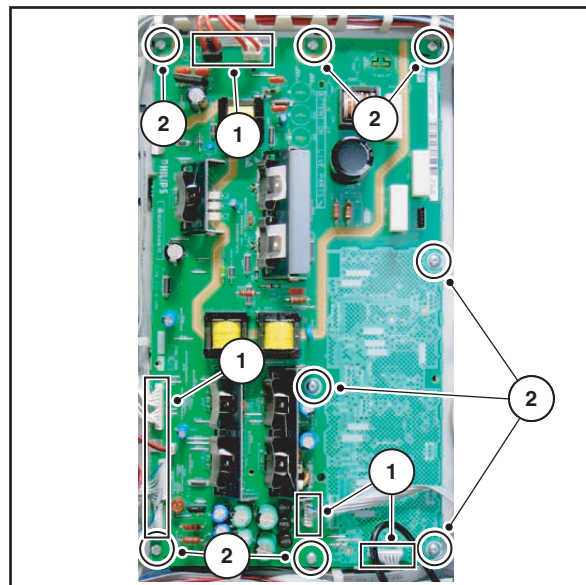
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Figure 4-27 Platform supply

4.4.9 LCD Panel Supply

1. Remove the rear cover, as described previously.
2. Unplug connectors [1] from the panel.
3. Remove screws [2].

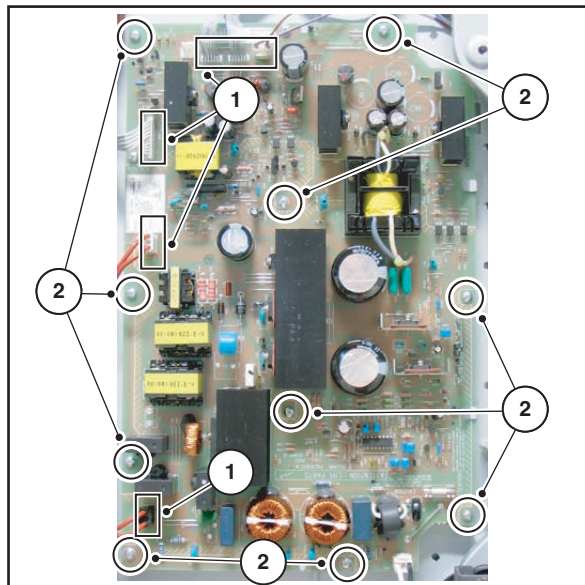
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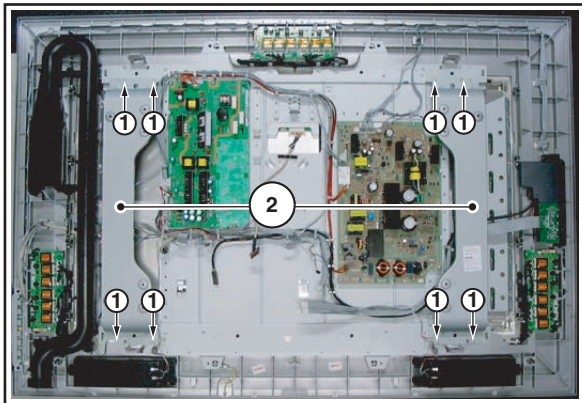
Figure 4-28 LCD panel supply

4.4.10 LCD Display Panel

For exchanging the LCD display, see figures "LCD Display Panel removal".

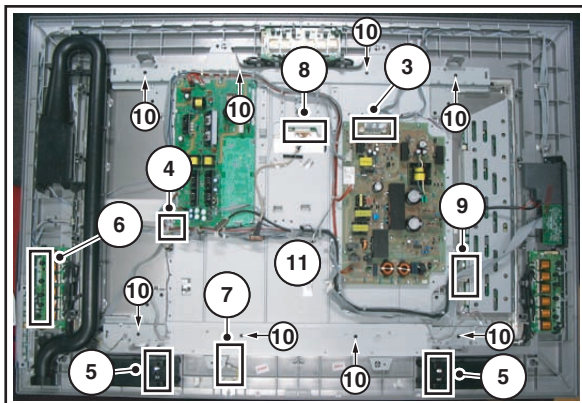
1. Remove the rear cover, as described previously.
2. Remove the SSB module, as described previously.
3. Remove the screws [1]
4. Remove brackets [2].
5. Unplug connectors [3] from the panel PSU.
6. Unplug connector [4] from the platform PSU.
7. Unplug connectors [5] from the loudspeakers.

8. Unplug connectors [6] from the right hand ambilight driver PWB.
9. Unplug earth wire [7].
10. Carefully unplug the fragile LVDS connector [8].
11. Unplug connector [9] from the X-Main PWB.
12. Remove screws [10].
13. Remove the metal subframe [11].
14. Remove screws [12].
15. Remove plastic subframe [13].
16. Release catches [14] and lift the ambilight frame [15] from the remains of the set.
17. Remove the LCD panel [16].



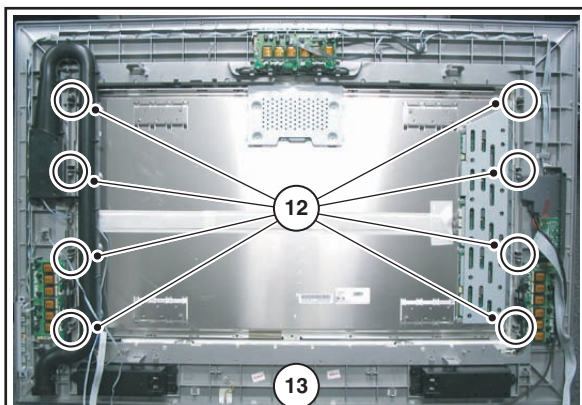
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Figure 4-29 LCD display panel removal 1/4



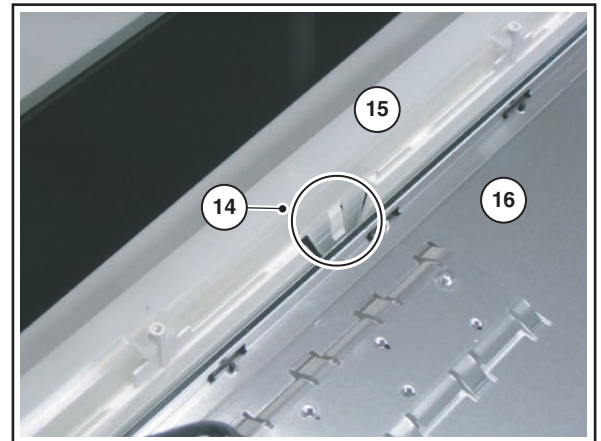
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Figure 4-30 LCD display panel removal 2/4



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Figure 4-31 LCD display panel removal 3/4

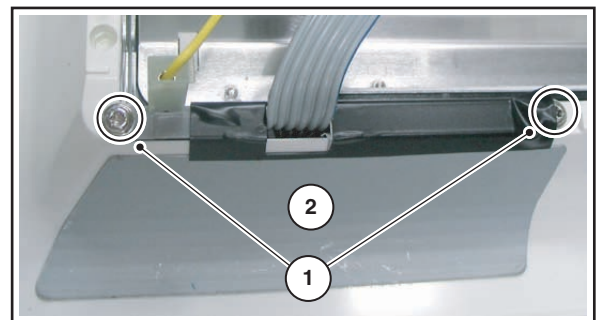


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Figure 4-32 LCD Display panel removal 4/4

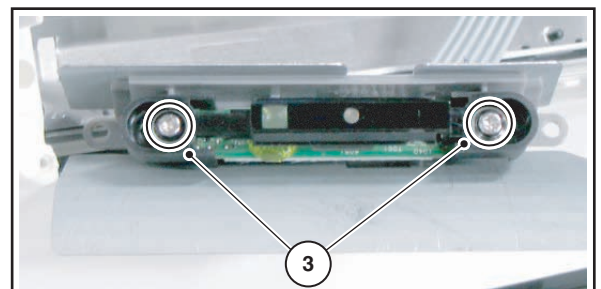
4.4.11 LED/IR Sensor Removal

1. Remove the LCD panel, as described previously.
2. Remove screws [1].
3. Pull bracket [2] out of the frame.
4. Remove screws [3].
5. Pull the PWB out of the bracket.
6. Unplug connector [4].



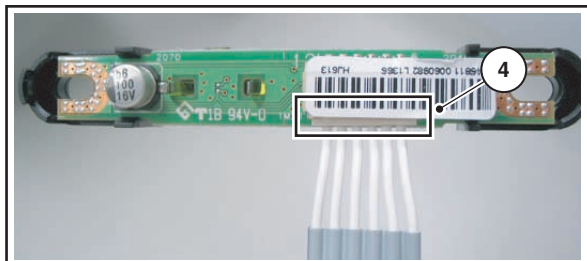
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Figure 4-33 LED/IR sensor removal 1/3



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Figure 4-34 LED/IR sensor removal 2/3

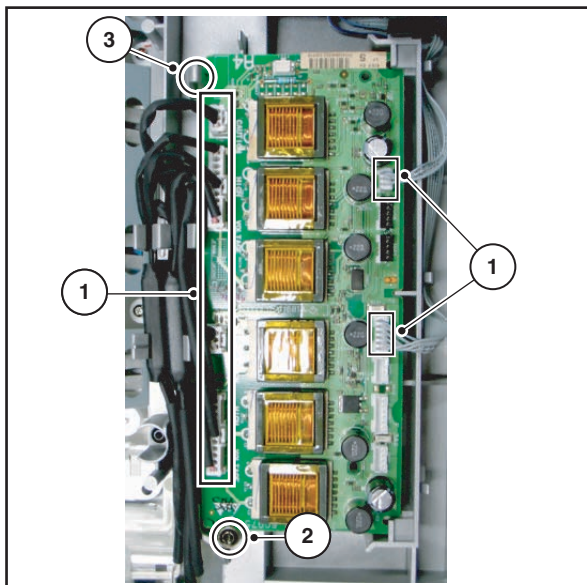


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Figure 4-35 LED/IR sensor removal 3/3

4.4.12 Ambilight Inverter Board Left

1. Remove the rear cover, as described previously.
2. Unplug connectors [1].
3. Remove screw [2].
4. Release clamp [3].

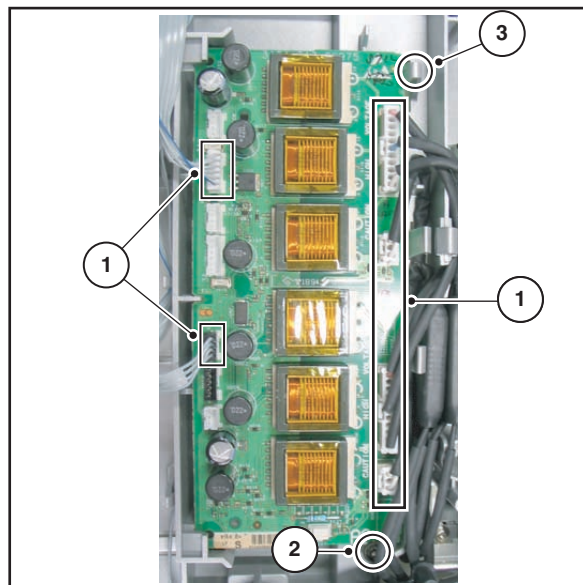


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Figure 4-36 Ambilight inverter board left

4.4.13 Ambilight Inverter Board Right

1. Remove the rear cover, as described previously.
2. Unplug connectors [1].
3. Remove screw [2].
4. Release clamp [3].

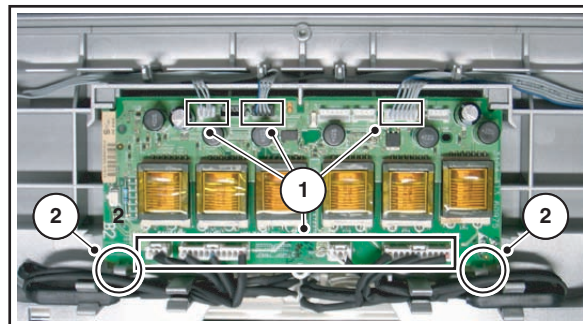


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Figure 4-37 Ambilight inverter board right

4.4.14 Ambilight Inverter Board Top

1. Remove the rear cover, as described previously.
2. Unplug connectors [1].
3. Release clamp [2].



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Figure 4-38 Ambilight inverter board top

4.4.15 Ambilight Module

1. Carry out the disassembly "LCD Display Panel", except for the last point.
2. Put the ambilight frame on a flat workbench.
3. Remove screws [1].

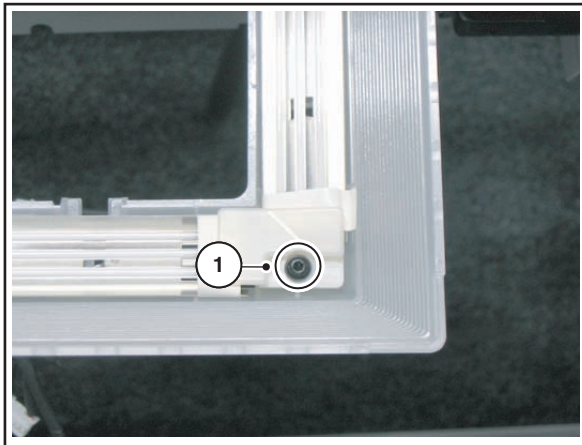
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Figure 4-39 Ambilight module

4.5 Assy/Panel Removal “Top B” styling

4.5.1 Rear Cover

Disconnect the Mains/AC Power cord before you remove the rear cover!

1. Place the TV set upside down on a table top, using the foam bars (see part “Foam Bars”).
Caution: do **not** put pressure on the display, but let the monitor lean on the front cover.
2. Remove the stand.
3. Remove mushrooms [1].
4. Remove screws [2].
5. Lift the Rear Cover from the TV. Make sure that wires and flat foils are not damaged while lifting the rear cover.

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Figure 4-40 Rear cover removal

4.5.2 Speakers

After removing the rear cover, you gain access to the speakers.

Caution: never disconnect the speakers with a playing set, because otherwise the class-D audio amplifiers could be damaged.

4.5.3 Key Control Panel

1. Remove the rear cover, as described previously.
2. Remove screws [1].
3. Release clips [2] and slide the PWB out of the plastic casing.
4. Unplug connector [3].

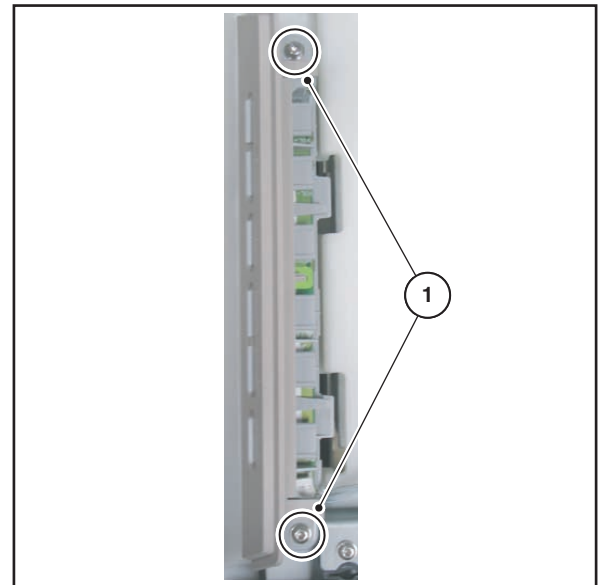
G_15990_124.eps
110506

Figure 4-41 Key control panel removal 1/2

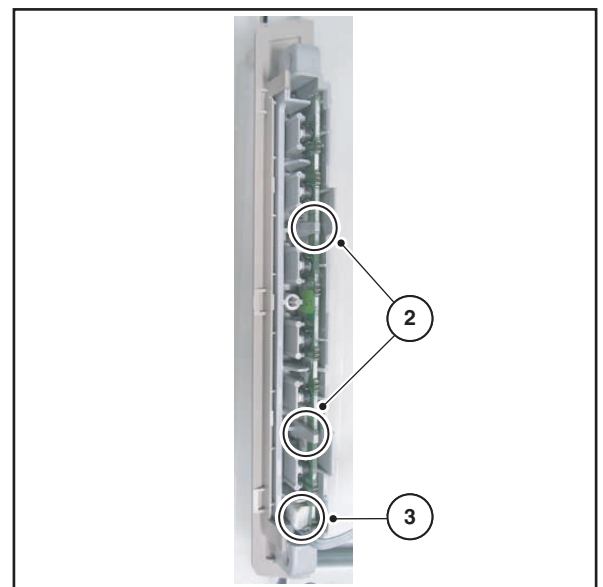
G_15990_125.eps
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Figure 4-42 Key control panel removal 2/2

When defective, replace the whole unit.

4.5.4 Side I/O Panel

1. Remove the rear cover, as described previously.
2. Release clamp [1] and slide the PWB out of its casing.
3. Unplug connector [2] from the panel.

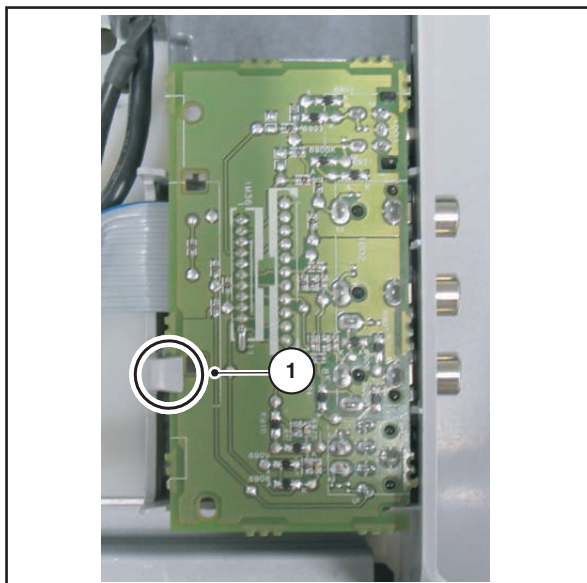
G_15990_126.eps
110506

Figure 4-43 Side I/O panel 1/2

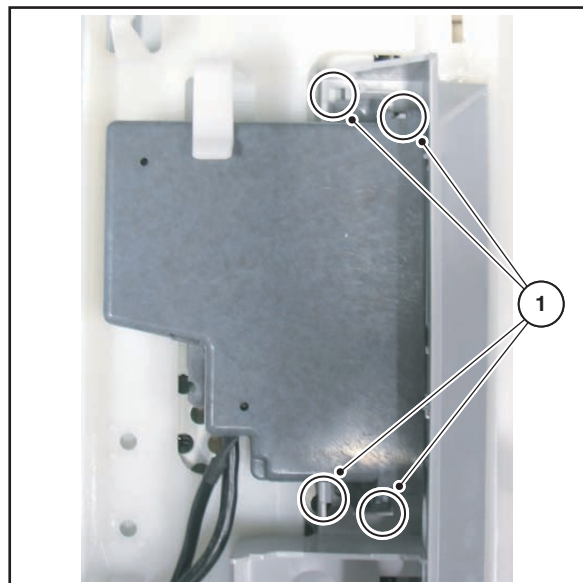
G_15990_128.eps
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Figure 4-45 Memory card reader / USB connector

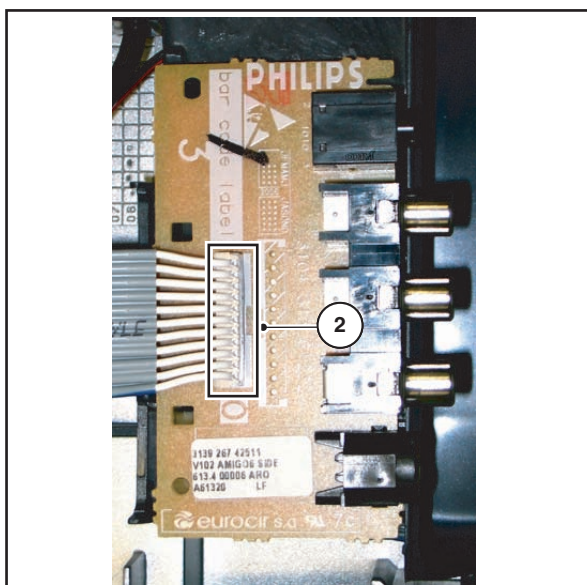
G_15990_127.eps
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Figure 4-44 Side I/O panel 2/2

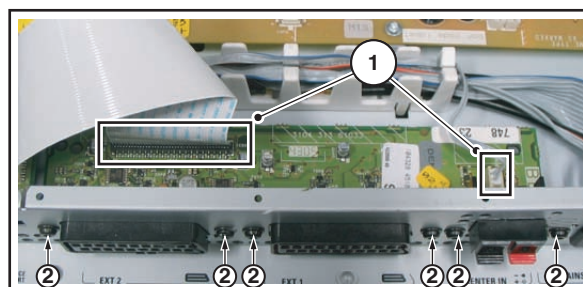
G_15990_129.eps
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Figure 4-46 External I/O SCART panel

4.5.5 Memory Card reader / USB connector

1. Remove the rear cover, as described previously.
2. Release clamps [1] and slide the unit out of its plastic frame.
3. Unplug the USB connector from the SSB panel, and the power cable from the PSU.

4.5.6 External I/O SCART Panel

1. Remove the rear cover, as described previously.
2. Unplug connectors [1] from the panel.
3. Remove screws [2].

4.5.7 Small Signal Board (SSB)

Caution: it is absolutely mandatory to remount all different screws at their original position during re-assembly. Failure to do so may result in damaging the SSB.

Removal from the set

1. Remove the rear cover, as described previously.
2. Unplug all connectors [1] from the SSB panel.
3. Unplug connector [2] from the PSU.
4. Remove screws [3].
5. Take the complete SSB module out of the set and place it on a flat workbench.

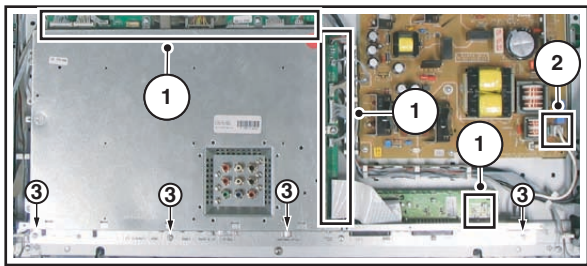
G_15990_130.eps
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Figure 4-47 SSB panel 1/4

Removing the shielding

1. Remove screws [4] .
2. Remove the connector plate [5] and the top shielding [6].
3. Remove screws [7] and remove the SSB panel from the bottom shielding.

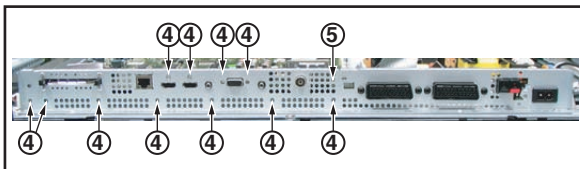
G_15990_131.eps
110506

Figure 4-48 SSB panel 2/4

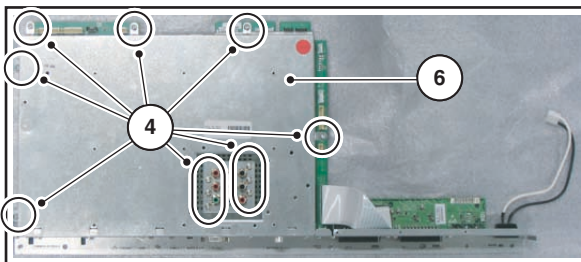
G_15990_132.eps
110506

Figure 4-49 SSB panel 3/4

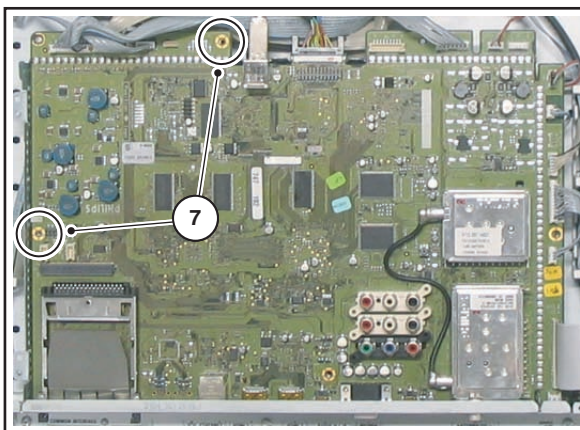
G_15990_133.eps
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Figure 4-50 SSB panel 4/4

4.5.8 Power Supply

1. Remove the rear cover, as described previously.
2. Unplug connectors [1] from the panel.
3. Remove screws [2].

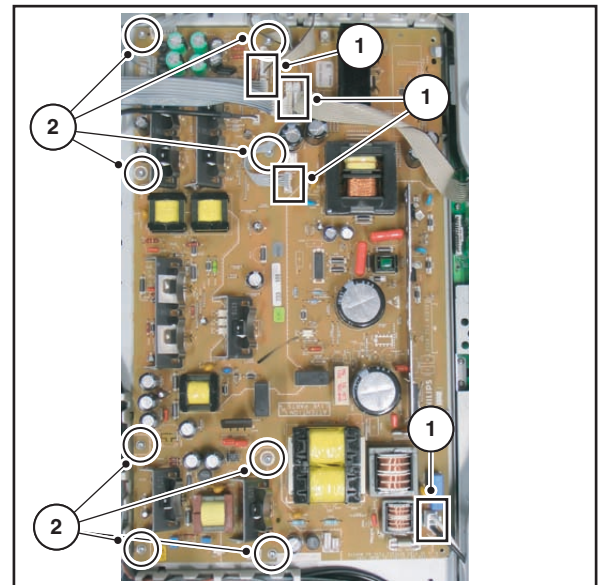
G_15990_134.eps
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Figure 4-51 Platform supply

4.5.9 LCD Display Panel

For exchanging the LCD display, see figures "LCD Display Panel removal".

1. Remove the rear cover, as described previously.
2. Remove screws [1].
3. Remove brackets [2].
4. Unplug LVDS connector [3] from the panel.
5. Unplug connector [4] of the IR/LED panel from the SSB.
6. Unplug connectors [5] from the loudspeakers.
7. Unplug connectors [6] from the ambient inverter PWB.
8. Remove screws [7] and put the key control unit on the subframe.
9. Release the Mem. Card Reader/Side I/O [8] and put it on the subframe.
10. Unplug connector [9] from the X-Main PWB.
11. Remove screws [10].
12. Remove the subframe [11].
13. Remove screws [12].
14. Remove brackets [13] and plastic ambient frame [14].
15. Remove the LCD panel [15].

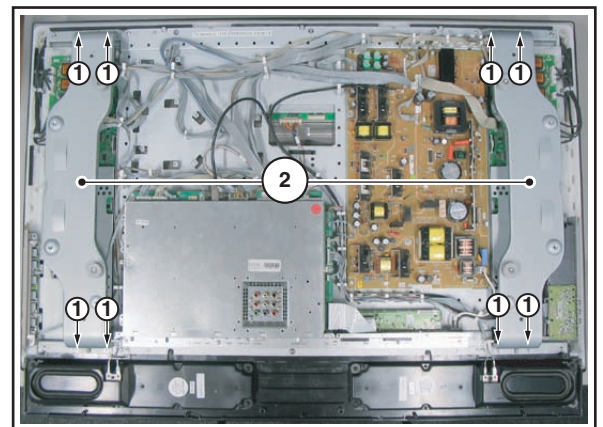
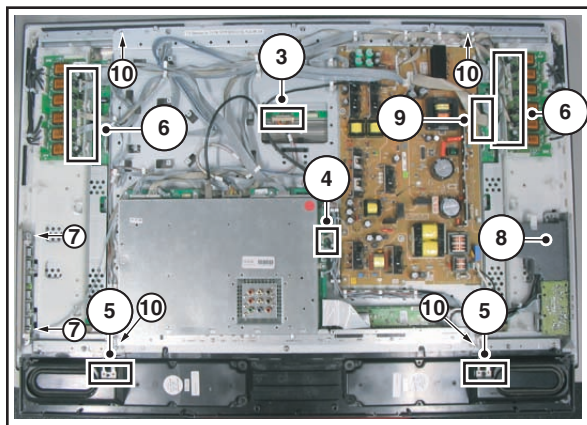
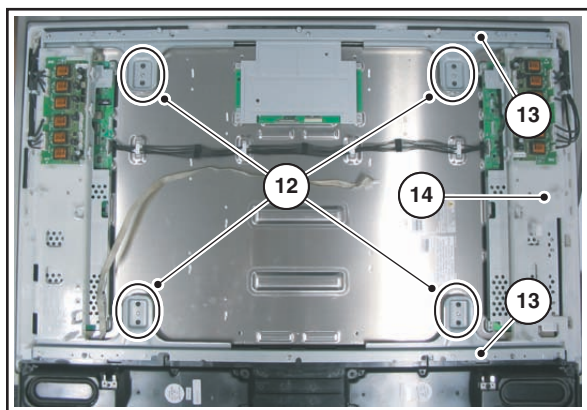
G_15990_135.eps
110506

Figure 4-52 LCD Display panel removal 1/4



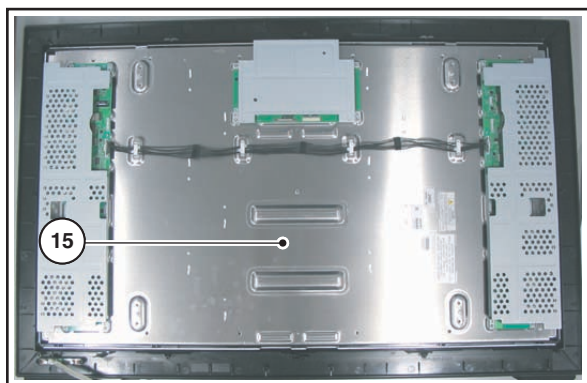
G_15990_136.eps
120506

Figure 4-53 LCD display panel removal 2/4



G_15990_137.eps
120506

Figure 4-54 LCD display panel removal 3/4

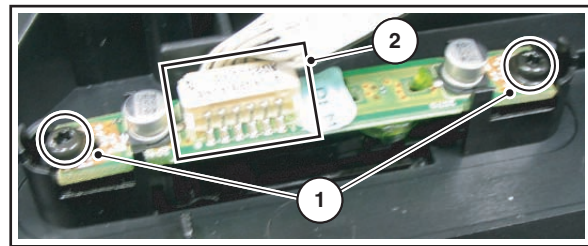


G_15990_138.eps
110506

Figure 4-55 LCD display panel removal 4/4

4.5.10 LED/IR Sensor Removal

1. Carry out the disassembly of the LCD panel, as described previously, except for the last point.
2. Remove screws [1].
3. Unplug connector [2].

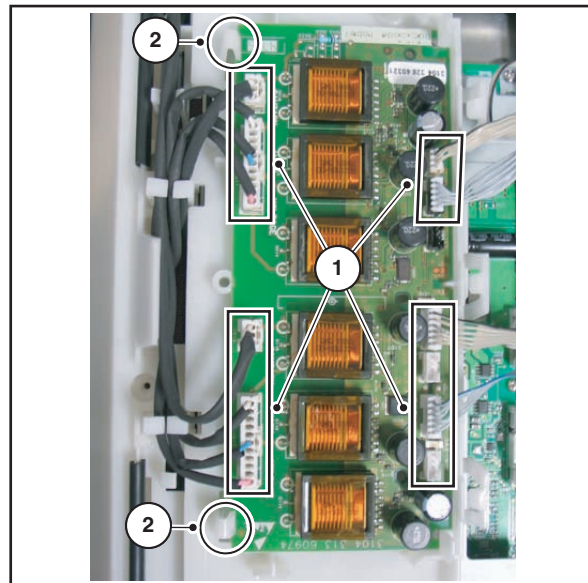


G_15990_139.eps
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Figure 4-56 LED/IR sensor removal

4.5.11 Ambilight Inverter Boards

1. Remove the rear cover, as described previously.
2. Remove the metal bracket, that is mounted over the Inverter Board you want to replace, as described previously.
3. Unplug connectors [1].
4. Release clamps [2].

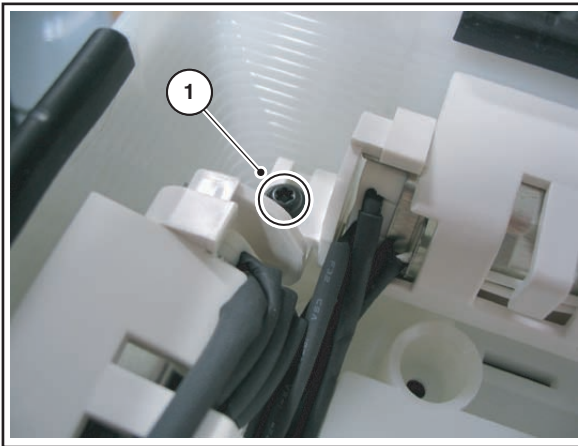


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Figure 4-57 Ambilight inverter board

4.5.12 Ambilight Module

1. Carry out the disassembly "LCD Display Panel", except for the last point.
2. Put the ambilight frame on a flat workbench.
3. Remove screws [1].



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Figure 4-58 Ambilight module

4.6 Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Notes:

- While re-assembling, make sure that all cables are placed and connected in their original position. See figure "Cable dressing".
- Pay special attention not to damage the EMC foams on the SSB shields. Ensure that EMC foams are mounted correctly.

5. Service Modes, Error Codes, and Fault Finding

Index of this chapter:

- 5.1 Test Points
- 5.2 Service Modes
- 5.3 Stepwise Start-up
- 5.5 Error Codes
- 5.6 The Blinking LED Procedure
- 5.7 Protections
- 5.8 Fault Finding and Repair Tips
- 5.9 Software Upgrading

5.1 Test Points

The chassis is equipped with test points (Fxxx) printed on the circuit board assemblies. As most signals are digital, it will be difficult to measure waveforms with a standard oscilloscope. Several key ICs are capable of generating test patterns, which can be controlled via ComPair. In this way it is possible to determine which part is defective.

Perform measurements under the following conditions:

- Service Default Mode.
- Video: Colour bar signal.
- Audio: 3 kHz left, 1 kHz right.

5.2 Service Modes

Service Default mode (SDM) and Service Alignment Mode (SAM) offers several features for the service technician, while the Customer Service Mode (CSM) is used for communication between the call centre and the customer.

This chassis also offers the option of using ComPair, a hardware interface between a computer and the TV chassis. It offers the abilities of structured troubleshooting, error code reading, and software version read-out for all chassis. *Minimum requirements for ComPair:* a Pentium processor, a Windows OS, and a CD-ROM drive (see also paragraph "ComPair").

5.2.1 Service Default Mode (SDM)

Purpose

- To create a pre-defined setting, to get the same measurement results as given in this manual.
- To override SW protections detected by stand-by processor and make the TV start up to the step just before protection (a sort of automatic stepwise start up). See paragraph "Stepwise Start Up".
- To override SW protections detected by Viper. Depending on the SW version it is possible that this mechanism does not work correctly. See also paragraph "Error codes".
- To start the blinking LED procedure (not valid in protection mode).

Specifications

Table 5-1 SDM default settings

Region	Freq. (MHz)	Default system
Europe, AP(PAL/Multi)	475.25	PAL B/G
Europe, AP DVBT	546.000 PID Video: 0B 06 PID PCR: 0B 06 PID Audio: 0B 07	DVBT

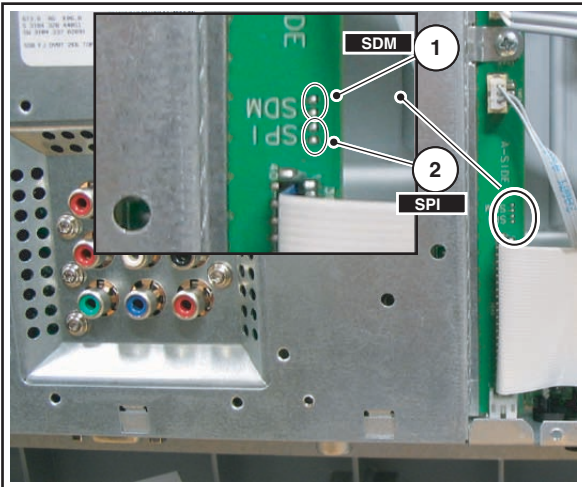
- All picture settings at 50% (brightness, colour, contrast).
- All sound settings at 50%, except volume at 25%.

- All service-unfriendly modes (if present) are disabled, like:
 - (Sleep) timer.
 - Child/parental lock.
 - Picture mute (blue mute or black mute).
 - Automatic volume levelling (AVL).
 - Auto switch "off" (when no video signal was received for 10 minutes).
 - Skip/blank of non-favourite pre-sets.
 - Smart modes.
 - Auto store of personal presets.
 - Auto user menu time-out.

How to Activate SDM

For DVBT TV's there are two kinds of SDM : an analogue SDM and a digital SDM. Tuning will happen according table "SDM Default Settings".

- Analogue SDM: use the standard RC-transmitter and key in the code "062596", directly followed by the "MENU" button.
Note: It is possible that, together with the SDM, the main menu will appear. To switch it "off", push the "MENU" button again.
- Digital SDM: use the standard RC-transmitter and key in the code "062593", directly followed by the "MENU" button. Depending on the software version it is possible that the tuning will not work correctly.
Note: It is possible that, together with the SDM, the main menu will appear. To switch it "off", push the "MENU" button again.
- Analogue SDM can also be activated by shorting for a moment the two solder pads [1] on the SSB, with the indication "SDM". They are located outside the shielding. Activation can be performed in all modes, except when the set has a problem with the Stand-by Processor. See figure "Service mode pads".



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Figure 5-1 Service mode pads

After activating this mode, "SDM" will appear in the upper right corner of the screen (if you have picture).

How to Navigate

When you press the "MENU" button on the RC transmitter, the set will toggle between the SDM and the normal user menu (with the SDM mode still active in the background).

How to Exit SDM

- Use one of the following methods:
- Switch the set to STAND-BY via the RC-transmitter.

- Via a standard customer RC-transmitter: key in "00"-sequence.

5.2.2 Service Alignment Mode (SAM)

Purpose

- To perform (software) alignments.
- To change option settings.
- To easily identify the used software version.
- To view operation hours.
- To display (or clear) the error code buffer.

How to Activate SAM

Via a standard RC transmitter: key in the code "062596" directly followed by the "INFO" button. After activating SAM with this method a service warning will appear on the screen, you can continue by pressing the red button on the RC.

Contents of SAM:

- **Hardware Info.**
 - **A. SW Version.** Displays the software version of the VIPER software (main software) (**example:** JA30E-1.2.3.4_12345 = AAAAB_X.Y.W.Z_NNNNN).
 - **AAAA**= the software name.
 - **B**= the region: A= AP, E= EU, L= LatAm, U = US. For AP sets it is possible that the Europe software version is used.
 - **X.Y.W.Z**= the software version, where X is the main version number (different numbers are not compatible with one another) and Y.W.Z is the sub version number (a higher number is always compatible with a lower number).
 - **NNNN**= last five digits of 12nc code of the software.
 - **B. SBY PROC Version.** Displays the software version of the stand-by processor.
 - **C. Production Code.** Displays the production code of the TV, this is the serial number as printed on the back of the TV set. Note that if an NVM is replaced or is initialized after corruption, this production code has to be re-written to NVM. ComPair will foresee in a possibility to do this.
- **Operation Hours.** Displays the accumulated total of operation hours (not the stand-by hours). Every time the TV is switched "on/off", 0.5 hours is added to this number.
- **Errors.** (Followed by maximal 10 errors). The most recent error is displayed at the upper left (for an error explanation see paragraph "Error Codes").
- **Defective Module.** Here the module that generates the error is displayed. If there are multiple errors in the buffer, which are not all generated by a single module, there is probably another defect. It will then display the message "UNKNOWN" here. Not all errors will display a defective module name.
- **Reset Error Buffer.** When you press "cursor right" and then the "OK" button, the error buffer is reset.
- **Alignments.** This will activate the "ALIGNMENTS" sub-menu.
- **Dealer Options.** Extra features for the dealers.
- **Options.** Extra features for Service. For more info regarding option codes, see chapter 8.
Note that if you change the option code numbers, you have to confirm your changes with the "OK" button before you store the options. Otherwise you will lose your changes.
- **Initialise NVM.** When an NVM was corrupted (or replaced) in the former EMG based chassis, the microprocessor replaces the content with default data (to assure that the set can operate). However, all preferences and alignment values are gone now, and option numbers are not correct. Therefore, this was a very drastic way. In this chassis, the procedure is implemented in another way: The moment the processor recognizes a corrupted NVM, the "initialize NVM" line will be highlighted. Now, you can do two things (depending of the service instructions at that moment):

- Save the content of the NVM via ComPair for development analysis, **before** initializing. This will give the Service department an extra possibility for diagnosis (e.g. when Development asks for this).
- Initialize the NVM (same as in the past, however now it happens conscious).

Note: When you have a corrupted NVM, or you have replaced the NVM, there is a high possibility that you will not have picture any more because your display option is not correct. So, before you can initialize your NVM via the SAM, you need to have picture and therefore you need the correct display option. To adapt this option, you can use ComPair (the correct HEX values for the options can be found in the table below) or a method via a standard RC (described below).

Changing the display option via a standard RC:

Key in the code "062598" directly followed by the "MENU" button and "XXX" (where XXX is the 3 digit decimal display option code as mentioned in the first column of the next table). Make sure to key in all three digits, also the leading zero's. If the above action is successful, the front LED will go out as an indication that the RC sequence was correct.

After the display option is changed in the NVM, the TV will go to the Stand-by mode.

If the NVM was corrupted or empty before this action, it will be initialised first (loaded with default values). This initialising can take up to 20 seconds.

Table 5-2 Display option code overview

Display Option	HEX	Display Type	Display Code Number	Size	Vertical Resolution
000	00	PDP SDI HD V3	V3_SA42AX-****-Rev,2	42"	768p
001	01	PDP SDI HD V3	V3-S50HW-XD03-v0,0	50"	768p
002	02	PDP FHP	A1-FPF42C128128UC-52-v01	42"	1024i
003	03	LCD LPL	LC300W01-A3P7-v2.1	30"	768p
004	04	LCD LPL	LC370W01-A6K1-v1.0	37"	768p
005	05	LCD LPL	LC420W02-A6-v1.0	42"	768p
006	06	LCD SHARP	ASV1-LQ315T3LZ13ASV2.2	32"	768p
007	07	PDP SDI SD V3	V3_S42SD-YD05-v0.2	42"	480p
008	08	PDP FHP	A1_PFP37C128128UB-71-v0.1	37"	1024i
009	09	LCOS XION	Xion1.05-v0.01	-	720p
010	0A	LCD AUO	T296XW01-v0.5	30"	768p
011	0B	LCD LPL	LC32CW01-A6K1v1.0	32"	768p
012	0C	LCD AUO	T315XW01V0-v0.1	32"	768p
013	0D	LCD SHARP	ASV2_LQ370T3LZ21ASV2.2LQ370T3LZ44	37"	768p
014	0E	LCD LPL full HD	LC420WU1-SL01-v0.0	42"	1080p
015	0F	PDP SDI SD		37"	480p
016	10	PDP FHP		37"	1080i
017	11	PDP FHP	tbF	42"	1080i
018	12	PDP FHP	FPF55C17196UA-51-v04	55"	768p
019	13	LCOS VENUS		-	720p
020	14	LCOS VENUS full HD		-	1080p
021	15	LCD LPL	LC260WX2-SL01-v1.0	26"	768p
022	16	LCD LPL clear LCD	LC320WX2-SL01	32"	768p
023	17	PDP LG SD	PDP42x2-56-Rev.00	42"	480p
024	18	PDP SDI V4	V4-S42SD-YD07-v0.0	42"	480p
025	19	PDP SDI V4	V4-S42AX-YD01-Rev0.1	42"	768p
026	1A	PDP FHP A2	FPF42C128128UD-51	42"	1024i
027	1B	PDP SDI HD V4	V4-S50HW-XD04-v0.2	50"	768p
028	1C	LCD Sharp full HD	LQ370D3LZ1xASV2.2	37"	1080p
029	1D	LCD AUO	T315XW01-V3-V0.1	32"	768p
030	1E	for development sample only	LW370D3LZ1xASV3.0 (first sample)		

Display Option	HEX	Display Type	Display Code Number	Size	Vertical Resolution
031	1F	LCD Sharp full HD clear LCD V3.0	LQ370D3LZ1x ASV3.0	37"	1080p
032	20	LCD LPL	LC200WX1-SL01	20"	768p
033	21	LCD QDI	QD23HL	23"	768p
034	22	ECO PTV		51"	1080i
035	23	ECO PTV		55"	1080i
036	24	ECO PTV		61"	1080i
037	25	PDP FHP A3	FPF42128135UA	42"	1024i
038	26	DLP	tbif	50"	720p
039	27	DLP	tbif	60"	720p
040	28	LCD Sharp V2.3	ASV 2.3	32"	768p
041	29	LCD LPL clear LCD	LC420WX2-SLA1	42"	768p
042	2A	PDP SDI V4		63"	768p
043	2B	LCD Sharp V3.0 clear LCD		37"	768p
044	2C	LCD Sharp V2.3		37"	768p
045	2D	LCD LPL		26"	768p
046	2E	LCD LPL		32"	768p

- **Store.** All options and alignments are stored when pressing "cursor right" and then the "OK"-button
- **SW Maintenance.**
 - **SW Events.** Not useful for Service purposes. In case of specific software problems, the development department can ask for this info.
 - **HW Events.** Not useful for Service purposes. In case of specific software problems, the development department can ask for this info.
- **Operating hours.** Here you are able to reset the operations hours of the display. This has to be done in case of replacement of the display.
- **Upload to USB.** Here you are able to upload several settings from the TV to a USB stick which is connected to the Side IO. The four items are "Channel list", "Personal settings", "Option codes" and "Display-related alignments". First you have to create a directory "repair\" in the root of the USB stick. To upload the settings you have to select each item separately, press "cursor right", confirm with "OK" and wait until "Done" appears. Now the settings are stored onto your USB stick and can be used to download onto another TV or other SSB. Uploading is of course only possible if the software is running and if you have picture. This method is created to be able to save the customer's TV settings and to store them into another SSB.
- **Download from USB.** Here you are able to download several settings from the USB stick to the TV. Same way of working as with uploading. To make sure that the download of the channel list from USB to the TV is executed properly, it is necessary to restart the TV and tune to a valid preset if necessary.

How to Navigate

- In SAM, you can select the menu items with the "CURSOR UP/DOWN" key on the RC-transmitter. The selected item will be highlighted. When not all menu items fit on the screen, move the "CURSOR UP/DOWN" key to display the next/previous menu items.
- With the "CURSOR LEFT/RIGHT" keys, it is possible to:
 - (De) activate the selected menu item.
 - (De) activate the selected sub menu.
- With the "OK" key, it is possible to activate the selected action.

How to Exit SAM

Use one of the following methods:

- Press the "MENU" button on the RC-transmitter.
- Switch the set to STAND-BY via the RC-transmitter.

5.2.3 Customer Service Mode (CSM)

Purpose

When a customer is having problems with his TV-set, he can call his dealer or the Customer Helpdesk. The service technician can then ask the customer to activate the CSM, in order to identify the status of the set. Now, the service technician can judge the severity of the complaint. In many cases, he can advise the customer how to solve the problem, or he can decide if it is necessary to visit the customer. The CSM is a read only mode; therefore, modifications in this mode are not possible.

When in this chassis, CSM is activated, a colour bar test pattern will be visible for 5 seconds. This test pattern is generated by the Pacific3. So if you see this test pattern you can determine that the back end video chain (Pacific3, LVDS and display) is working.

Also new in this chassis: when you activate CSM and there is a USB stick connected to the TV, the software will dump the complete CSM content to the USB stick. The file (Csm.txt) will be saved in the root of your USB stick. This info can be handy if you don't have picture.

How to Activate CSM

Key in the code "123654" via the standard RC transmitter.

Note: Activation of the CSM is only possible if there is no (user) menu on the screen!

How to Navigate

By means of the "CURSOR-DOWN/UP" knob on the RC-transmitter, you can navigate through the menus.

Contents of CSM

- **Set Type.** This information is very helpful for a helpdesk/ workshop as reference for further diagnosis. In this way, it is not necessary for the customer to look at the rear of the TV-set. Note that if an NVM is replaced or is initialized after corruption, this set type has to be re-written to NVM. ComPair will foresee a possibility to do this.
- **Production Code.** Displays the production code (the serial number) of the TV. Note that if an NVM is replaced or is initialized after corruption, this production code has to be re-written to NVM. ComPair will foresee a possibility to do this.
- **Code 1.** Gives the latest five errors of the error buffer. As soon as the built-in diagnose software has detected an error the buffer is adapted. The last occurred error is displayed on the leftmost position. Each error code is displayed as a 2-digit number. When less than 10 errors occur, the rest of the buffer is empty (00). See also paragraph Error Codes for a description.
- **Code 2.** Gives the first five errors of the error buffer. See also paragraph Error Codes for a description.
- **Options 1.** Gives the option codes of option group 1 as set in SAM (Service Alignment Mode).
- **Options 2.** Gives the option codes of option group 2 as set in SAM (Service Alignment Mode).
- **12NC SSB.** Gives an identification of the SSB as stored in NVM. Note that if an NVM is replaced or is initialized after corruption, this identification number has to be re-written to NVM. ComPair will foresee a possibility to do this. This identification number consists of 14 characters and is built up as follows:
 - 8 last characters of the 12NC of the SSB itself.
 - the serial number of the SSB, which consists of 6 digits.
 Both can be found on a sticker on the PWB of the SSB itself (**not** on the sticker on the outside of the shielding!). The format of the identification number is then as follows: <last 8 characters of 12NC of SSB><serial number of SSB> (total 14 characters).
- **Digital Natural Motion.** Gives the last status of the Digital Natural Motion setting, as set by the customer. Possible

values are “Off”, “Minimum” and “Maximum”. See DFU on how to change this item.

- **Pixel Plus.** Gives the last status of the Pixel Plus setting, as set by the customer. Possible values are “On” and “Off”. See DFU on how to change this item.
- **DNR.** Gives the last status of the DNR setting, as set by the customer. Possible values are “Off”, “Minimum”, “Medium” and “Maximum”. See DFU on how to change this item.
- **Noise Figure.** Gives the noise ratio for the selected transmitter. This value can vary from 0 (good signal) to 127 (average signal) and to 255 (bad signal). For some software versions, the noise figure will only be valid when “Active Control” is set to “medium” or “maximum” before activating CSM. Noise figure is not applicable for DVBT channels.
- **Headphone Volume.** Gives the last status of the headphone volume, as set by the customer. The value can vary from 0 (volume is minimum) to 100 (volume is maximum). See DFU on how to change this item.
- **Dolby.** Indicates whether the received transmitter transmits Dolby sound (“ON”) or not (“OFF”). Attention: The presence of Dolby can only be tested by the software on the Dolby Signalling bit. If a Dolby transmission is received without a Dolby Signalling bit, this indicator will show “OFF” even though a Dolby transmission is received.
- **Surround Mode.** Indicates the by the customer selected sound mode (or automatically chosen mode). Possible values are “STEREO” and “VIRTUAL DOLBY SURROUND”. It can also have been selected automatically by signalling bits (internal software). See DFU on how to change this item.
- **Centre Input.** Not applicable for this chassis.
- **Audio System.** Gives information about the audible audio system. Possible values are “Stereo”, “Mono”, “Mono selected”, “Dual I”, “Dual II”, “Nicom Stereo”, “Nicom mono”, “Nicom dual I”, “Nicom dual II”, “Nicom available”, “Analog In: No Dig. Audio”, “Dolby Digital 1+1”, “Dolby Digital 1/0”, “Dolby Digital 2/0”, “Dolby Digital 2/1”, “Dolby Digital 2/2”, “Dolby Digital 3/0”, “Dolby Digital 3/1”, “Dolby Digital 3/2”, “Dolby Digital Dual I”, “Dolby Digital Dual II”, “MPEG 1+1”, “MPEG 1/0”, “MPEG 2/0” and “Not supported signal”. This is the same info as you will see when pressing the “INFO” button in normal user mode (item “Sound”). When the audio is muted, there will be no info displayed.
- **AVL.** Indicates the last status of AVL (Automatic Volume Level) as set by the customer. See DFU on how to change this item.
- **Delta Volume.** Indicates the last status of the delta volume for the selected preset as set by the customer: from “-12” to “+12”. See DFU on how to change this item..
- **Preset Lock.** Indicates if the selected preset has a child lock: “LOCKED” or “UNLOCKED”. See DFU on how to change this item..
- **Child lock.** Indicates if “Child lock” is set to “UNLOCK”, “LOCKED” or “CUSTOM LOCK”. See DFU on how to change this item..
- **Lock after.** Indicates at what time the channel lock is set: “OFF” or e.g. “18:45” (lock time). See DFU on how to change this item.
- **Parental rating lock.** Gives the last status of the parental rating lock as set by the customer. See DFU on how to change this item.
- **Parental rating status.** Gives the value of the parental rating status as sent by the current preset.
- **TV ratings lock.** Only applicable for US.
- **Movie ratings lock.** Only applicable for US.
- **V-Chip TV status.** Only applicable for US.
- **V-Chip movie status.** Only applicable for US.
- **Region rating status (RRT).** Only applicable for US.
- **On timer.** Indicates if the “On timer” is set “ON” or “OFF” and when it is set to “ON”, also start time, start day and program number is displayed. See DFU on how to change this item.
- **Location.** Gives the last status of the location setting as set via the installation menu. Possible values are “Shop”

and “Home”. If the location is set to “Shop”, several settings are fixed. So for a customer location must be set to “Home”. Can be changed via the installation menu (see also DFU).

- **HDMI key validity.** Indicates if the HDMI keys (or HDCP keys) are valid or not. In case these keys are not valid and the customer wants to make use of the HDMI functionality, the SSB has to be replaced.
- **IEEE key validity.** Not applicable.
- **POD key validity.** Not applicable.
- **Tuner Frequency.** Indicates the frequency the selected transmitter is tuned to.
- **TV System.** Gives information about the video system of the selected transmitter. In case a DVBT signal is received this item will also show ATSC.
 - BG: PAL BG signal received
 - DK: PAL DK signal received
 - L/La: SECAM L/La signal received
 - I: PAL I signal received
 - M: NTSC M signal received
 - ATSC: ATSC or DVBT signal received
- **Source.** Indicates which source is used and the video quality of the selected source. (Example: Tuner, Video) Source: “TUNER”, “EXT1”, “EXT2”, “EXT3”, “EXT4”, “YPbPr1”, “YPbPr2”, “VGA”, “DVI-I”, “HDMI 1”, “HDMI 2”, “SIDE” and “DVI”. Video signal quality: “VIDEO”, “S-VIDEO”, “RGB 1FH”, “YUV”, “VGA”, “SVGA”, “XGA”, “CVBS”, “Y/C”, “YPBPR 1FH 480p”, “YPBPR 1FH 576p”, “YPBPR 1FH 1080i”, “YPBPR 2FH 480p”, “YPBPR 2FH 576p”, “YPBPR 2FH 1080i”, “RGB 2FH 480p”, “RGB 2FH 576p”, “RGB 2FH 1080i”, “720p” or “Unsupported”.
- **Tuned Bit.** Due to the DVBT architectural setup this item does not give useful information any more.
- **Digital signal modulation.** No useful information for Service purposes.
- **12NC one zip SW.** Displays the 12NC number of the one-zip file as it is used for programming software in production. In this one-zip file all below software version can be found.
- **Initial main SW.** Displays the main software version which was initially loaded by the factory.
- **Current main SW.** Displays the built-in main software version. In case of field problems related to software, software can be upgraded. As this software is consumer upgradable, it will also be published on the Internet. Example: BX31E_1.2.3.4.
- **Flash utils SW.** Displays the software version of the software which contains all necessary components of the download application. To program this software, EJTAG tooling is needed. Example: FLASH_1.1.0.0.
- **Standby SW.** Displays the built-in stand-by processor software version. Upgrading this software will be possible via ComPair or via USB.(see chapter Software upgrade). Example: STDBY_3.0.1.2.
- **MOP SW.** Displays the MOP software version in case there is a MOP present.
- **Pacific 3 Flash SW.** Displays the Pacific 3 software version.
- **NVM version.** Displays the NVM version as programmed by factory.

How to Exit CSM

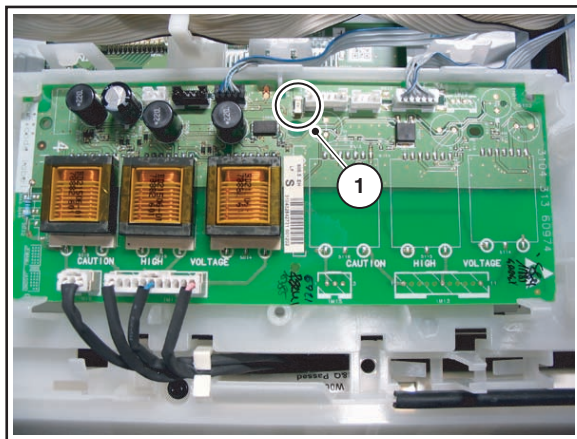
Press “MENU” on the RC-transmitter.

5.2.4 Service Mode of Converter Boards for Ambi Light

Purpose

To switch on the lamps manually in case I²C-bus triggering fails.

The Service Mode can be activated by disconnecting connectors 1M59 and 1M49 and then by shorting for a moment the two solder pads [1] on the Ambi Light Inverter Panel. See figure “Service Mode pads”.

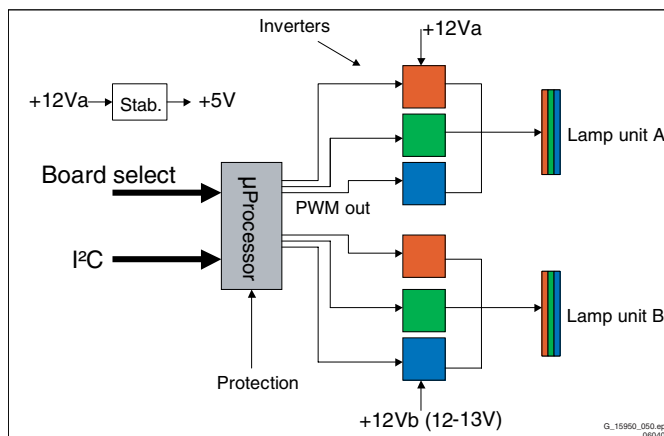


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060406

Figure 5-2 Service Mode pads AmbiLight panel

In this chassis, both single and double fitted boards can be used. The double fitted boards are used in sets with 3 or 4 sided Ambi Light units whereas the single fitted boards are used in sets with 2 sided Ambi Light units. A double fitted board can drive 2 lamp units (6 lamps) and a single fitted board can drive 1 lamp unit (3 lamps).

The double fitted boards are supplied by +12Va and +12Vb. The microprocessor is supplied by +12Va. Therefore, if only +12Va is available, lamp unit B will not work. See figure "Building blocks of Converter Board" for details.



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060406

Figure 5-3 Building blocks of Converter Board

The microprocessor performs the following tasks:

- Dimming of Ambi Light by means of PWM.
- Translation of I²C-bus commands to PWM.
- Switches the Ambi Light board to protection if needed (in case of protection only the lamps switch off, no set protection is triggered).

There are two ways of protection: parallel arcing protection and serial arcing protection.

Parallel arcing protection is performed by sensing the switching frequency. In case of short circuit of the transformer output, this frequency > 100 kHz and the board goes into protection.

Serial arcing protection is performed by detection of arc in ground wire of the lamp units. In this case, the protection pulse is transmitted via an opto-coupler.

Protection can be disabled by short-circuiting diode 6112 or capacitor 2173 or by connecting pin 8 of the microprocessor to ground.

Repair Tips

In case only one or no lamp unit at all works, probably the +12Vb (12 - 13 V) is not available or the fuse is broken. Check for broken MOSFETS or check if they are switched off properly by the transistors connected to the PWM outputs of the microprocessor.

In case the Ambi Light switches off after two seconds, serial arcing or parallel arcing protection is active. Serial arcing protection can be excluded by disconnecting the opto-coupler; check for bad solder joints on transformer or lamp units. Parallel arcing protection can be disabled by grounding pin 8 of the microprocessor. Usually the switching frequency (normally 63 kHz) will then be too high. Possible causes are one MOSFET of the converter has no gate drive or is broken, or there is a short-circuit of the output of the transformer.

5.3 Stepwise Start-up

The stepwise start-up method, as known from FTL/FTP sets (EMG based sets) is not valid any more. There are two possible situation: one for protections detected by standby software and one for protections detected by main software.

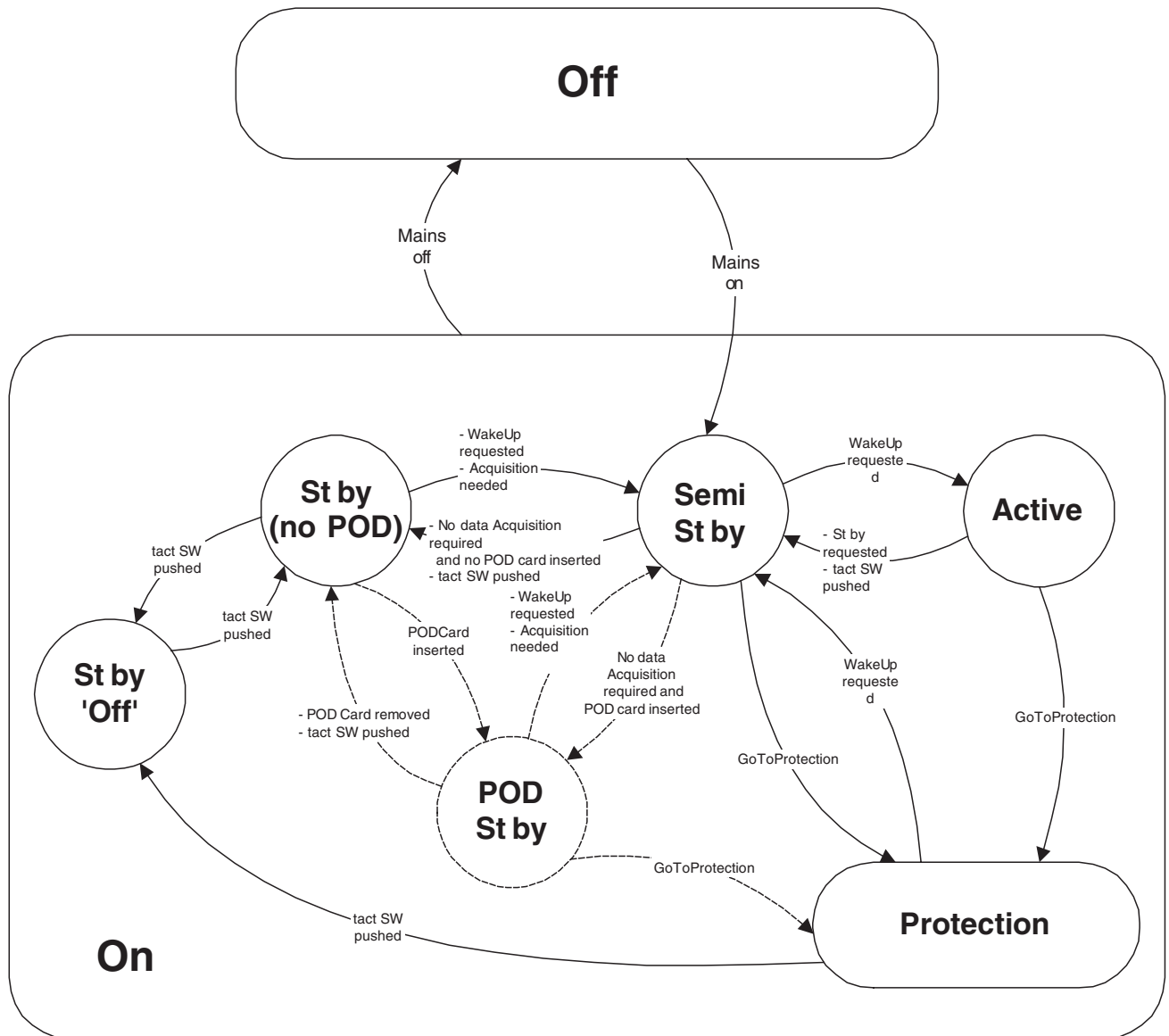
When the TV is in a protection state due to an error detected by standby software (and thus blinking an error) **and** SDM is activated via shortcutting the pins on the SSB, the TV starts up until it reaches the situation just before protection. So, this is a kind of automatic stepwise start-up. In combination with the start-up diagrams below, you can see which supplies are present at a certain moment. Important to know here is, that if e.g. the 3V3 detection fails (and thus error 11 is blinking) **and** the TV is restarted via SDM, the Stand-by Processor will enable the 3V3, but will not go to protection now. The TV will stay in this situation until it is reset (Mains/AC Power supply interrupted).

When the TV is in protection state due to an error detected by main software (Viper protection) **and** SDM is activated via shortcutting the pins on the SSB, the TV starts up and ignores the error. Due to architectural reasons it is possible that the TV will end up in an undefined state (e.g. when the fast I²C bus is blocked). In this case diagnose has to be done via ComPair.

The abbreviations "SP" and "MP" in the figures stand for:

- SP: protection or error detected by the Stand-by Processor.
- MP: protection or error detected by the VIPER Main Processor.

In the next transition diagrams for "POD" should be read "Common Interface (CI)". For analogue sets, any reference to "POD" should be neglected.



The protection state is hardware wise identical to the standby state but has other, limited wake up reasons.

The POD st-by mode is currently not used in a Full Jaguar (FJ) environment since all US products use the Baby Jaguar (BJ) platform and a POD st-by mode is of no use in a non US environment.

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120506

Figure 5-4 Transition diagram

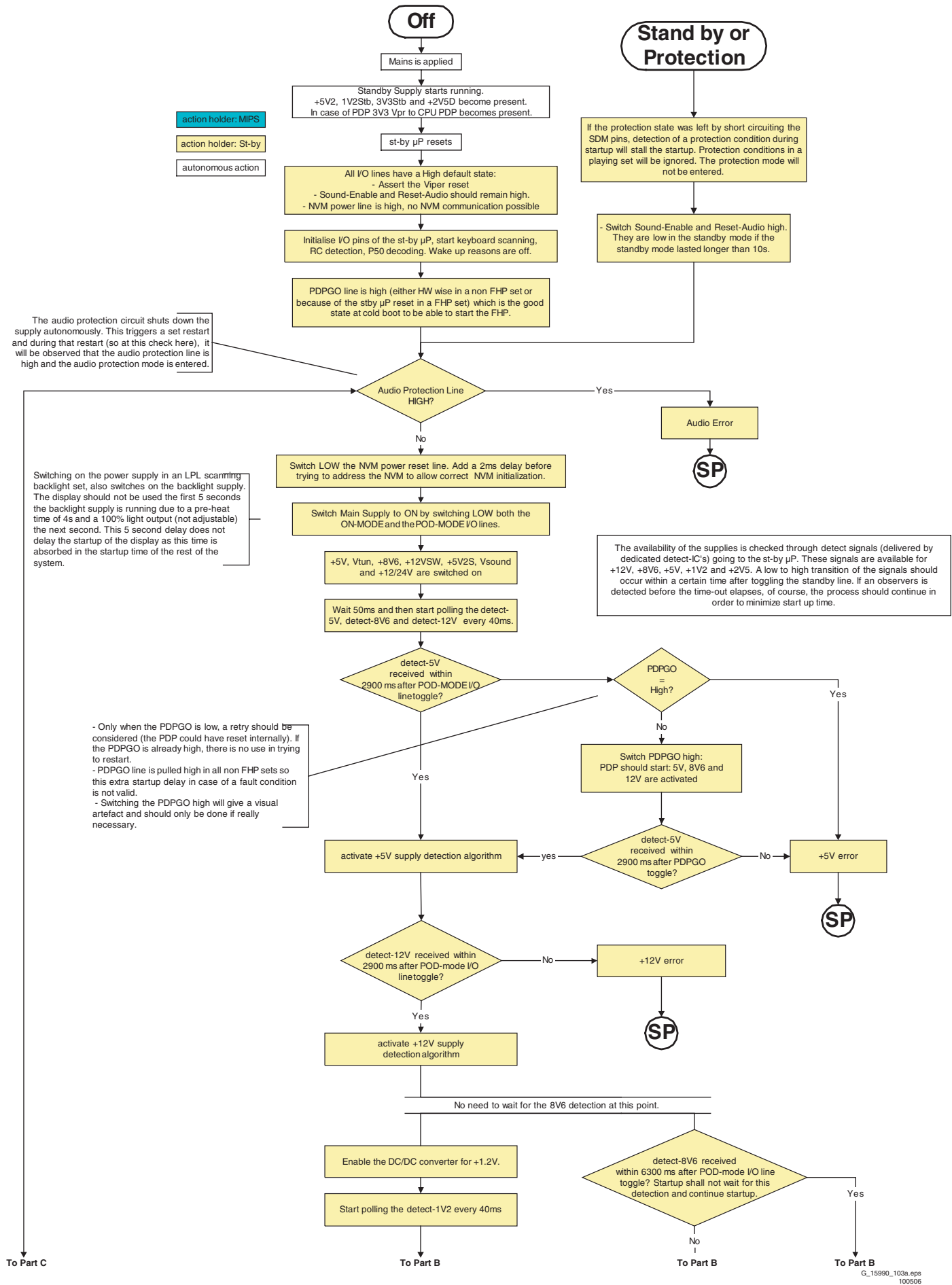
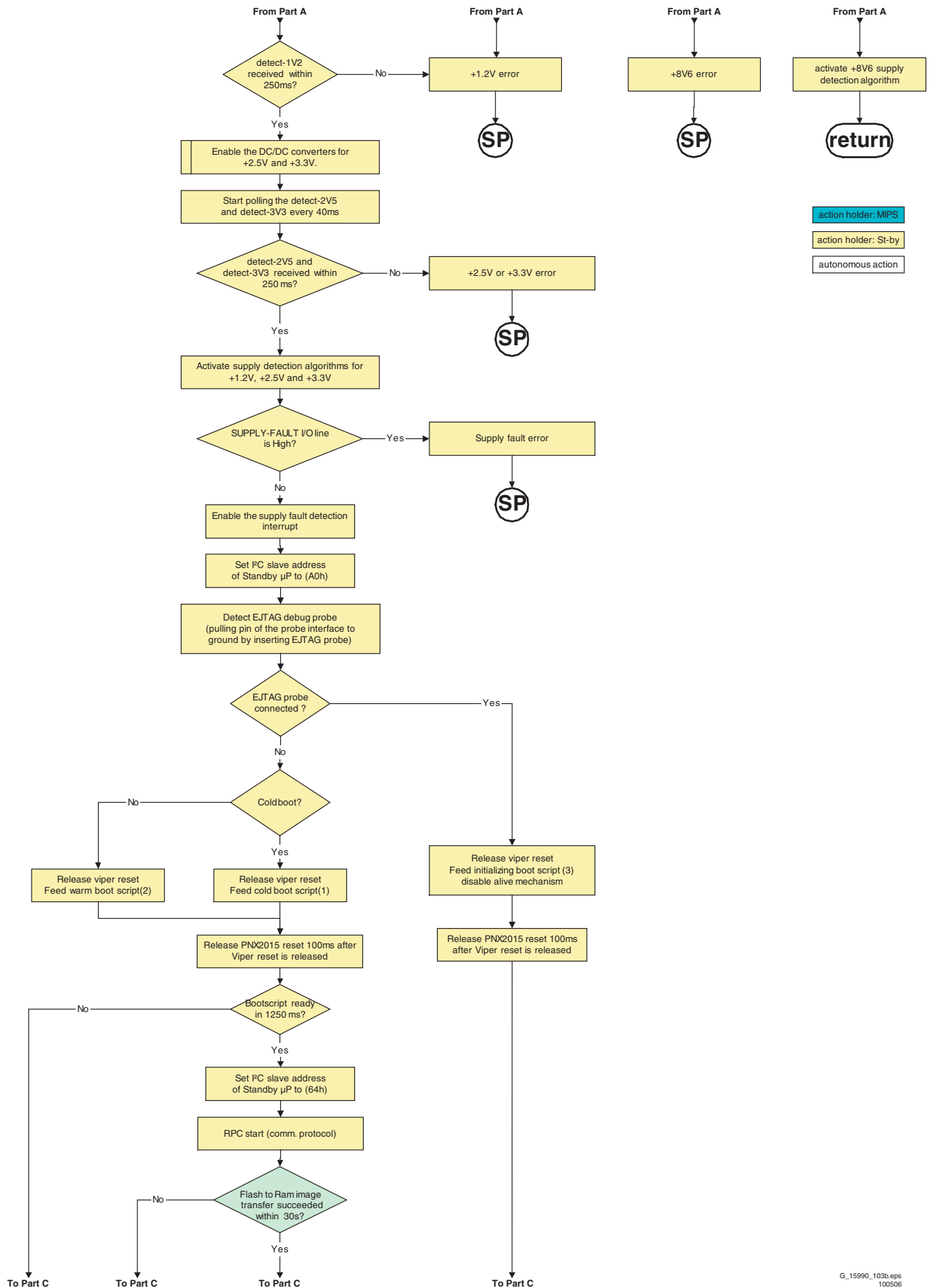


Figure 5-5 "Off" to "Semi Stand-by" flowchart (part 1)



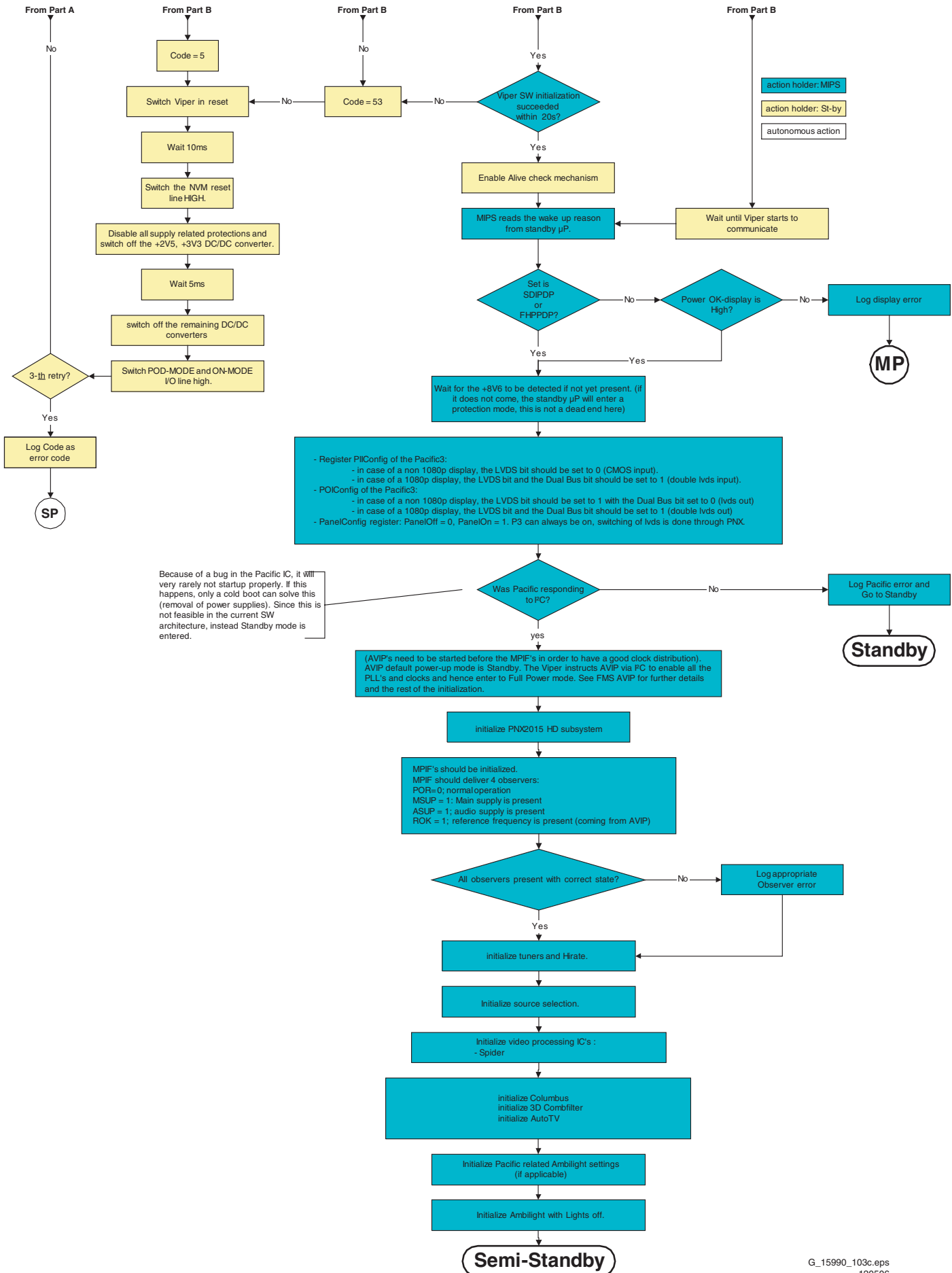


Figure 5-7 "Off" to "Semi Stand-by" flowchart (part 3)

32" / 42" LCD LPL scanning backlight

The assumption here is that a fast toggle (<2s) can only happen during ON->SEMI->ON. In these states, the Viper is still active and can provide the 2s delay. If the transition ON->SEMI->STBY->SEMI->ON can be made in less than 2s, we have to delay the semi->stby transition until the requirement is met.

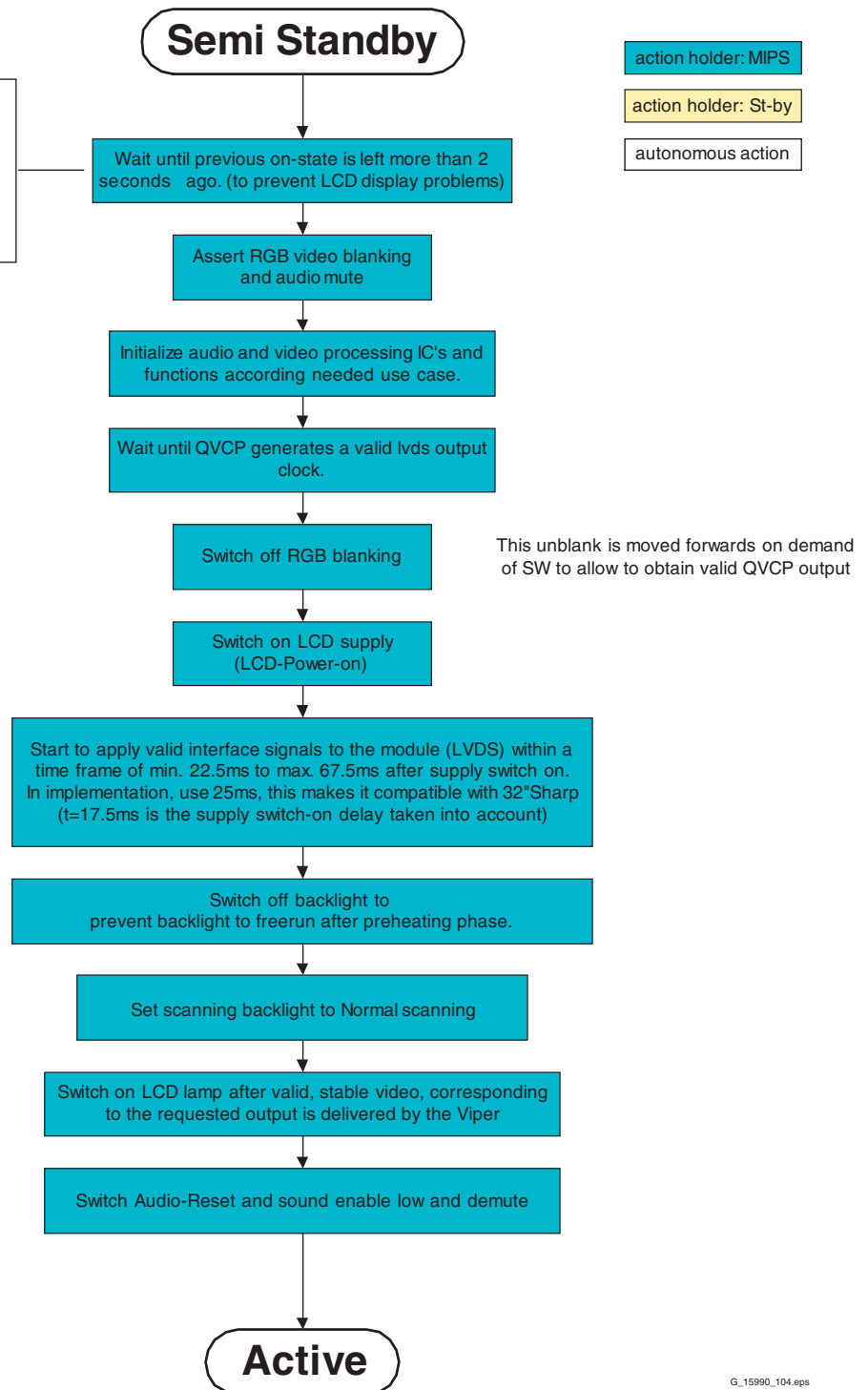


Figure 5-8 "Semi Stand-by" to "Active" flowchart 32" & 42" LCD LPL scanning backlight display

37" Clear LCD HD SHARP

Constraints taken into account:

- Display may only be started when valid QVCP output clock can be delivered by the Viper.
- Between 10 and 20 ms after power is supplied, display should receive valid lvds clock.
- minimum wait time to switch on the lamp after power up is 200ms.
- RGB (on QVCP output) may be unblanked before valid output is available. Unblanking of the picture happens with the use of the 'lamp on', not with the RGB. By doing so, black level differences during startup are avoided.

Setup:

- The Pacific which is driving the LVDS transmitter will also handle the startup of the display supply (LCD-power-online).
- The Viper can trigger the display startup or shutdown through the Pacific command "PanelConfig.PanelOn".

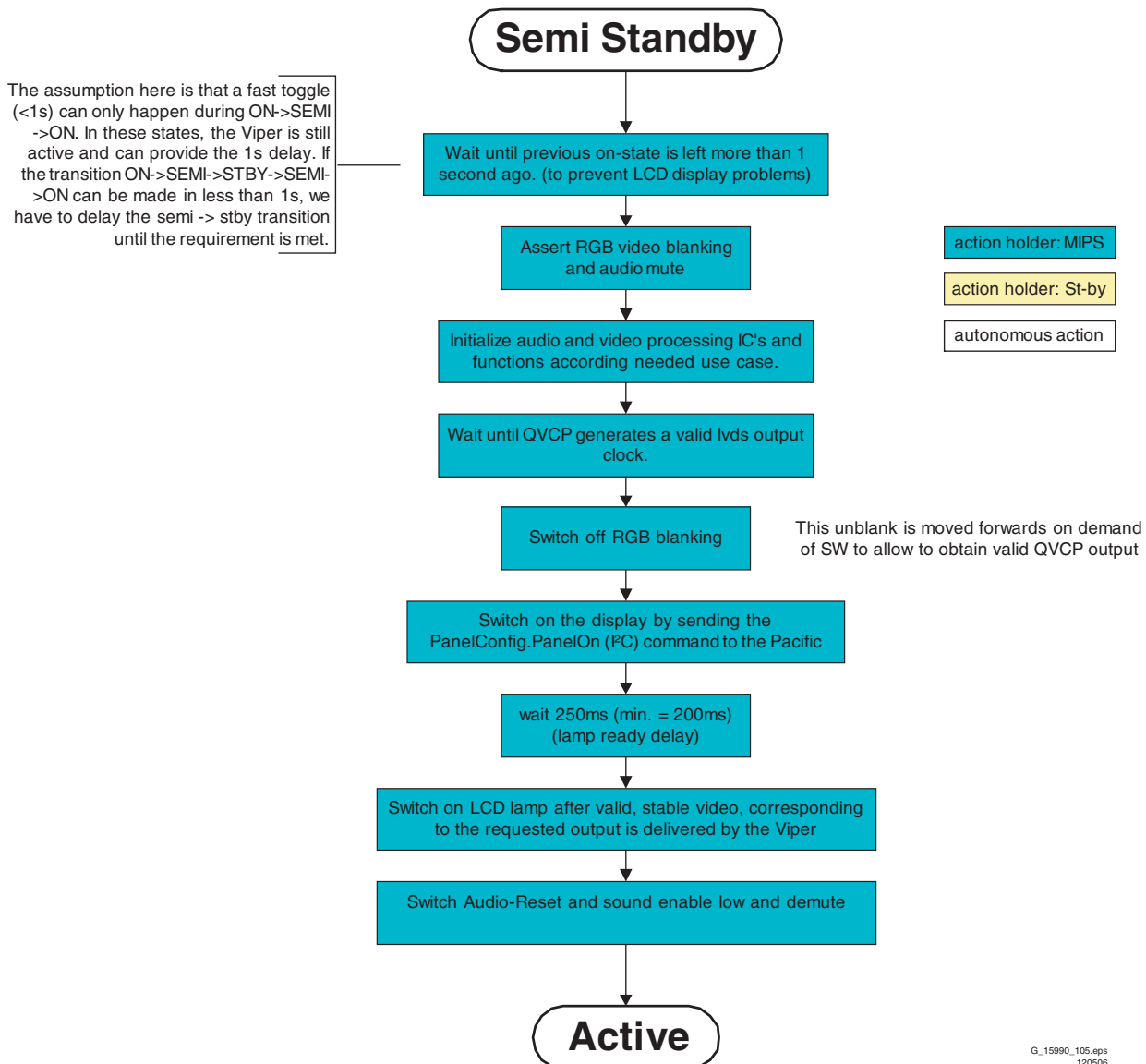


Figure 5-9 "Semi Stand-by" to "Active" flowchart 37" Clear LCD HD SHARP display

32" / 42" LCD LPL scanning backlight

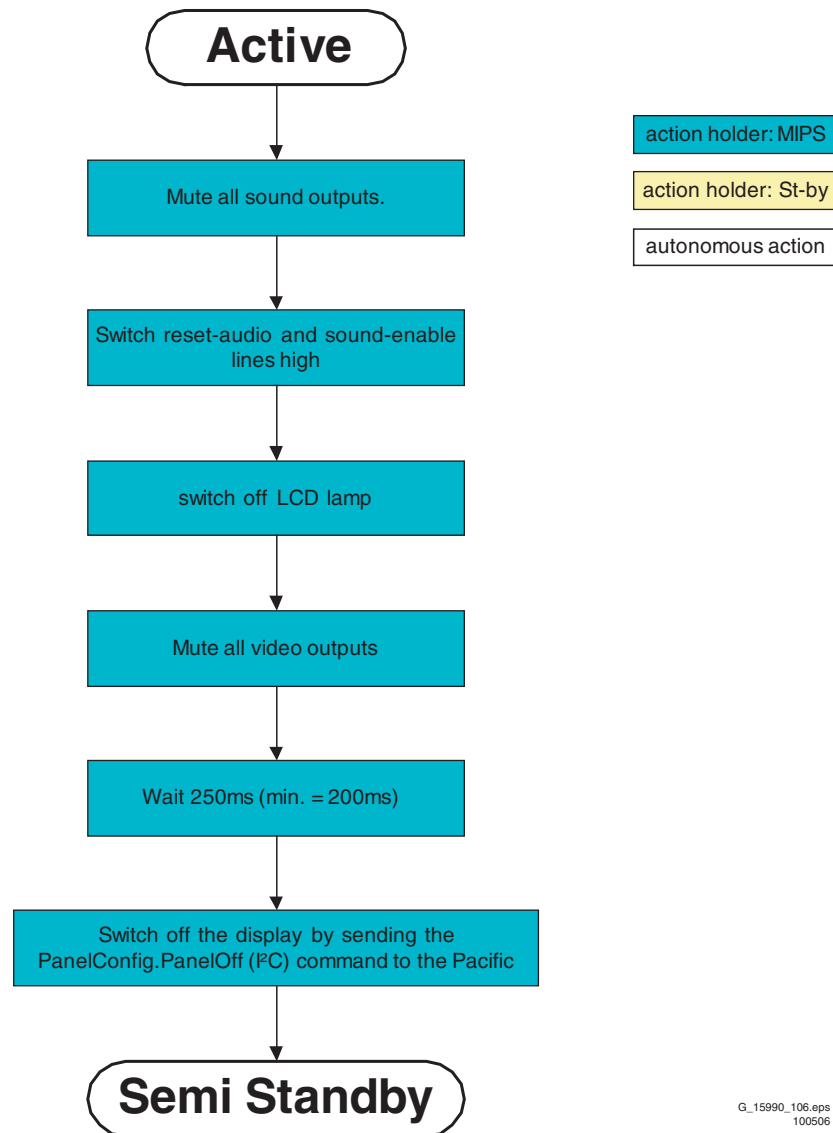


Figure 5-10 “Active” to “Semi Stand-by” flowchart 32” & 42” LCD LPL scanning backlight

37" Clear LCD HD SHARP

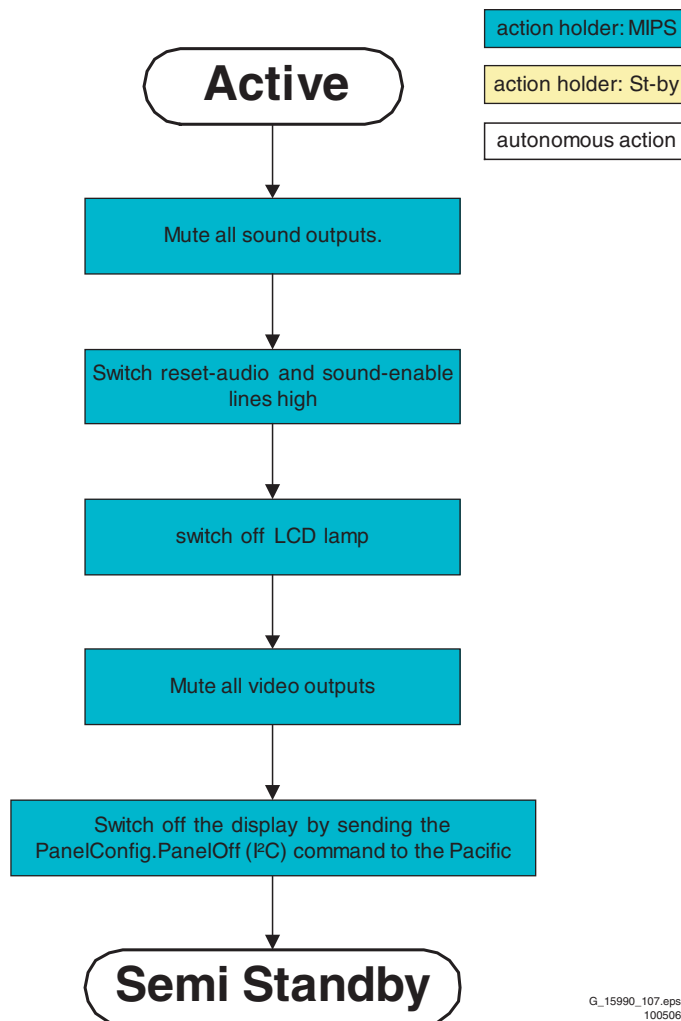


Figure 5-11 "Active" to "Semi Stand-by" flowchart 37" Clear LCD HD SHARP display

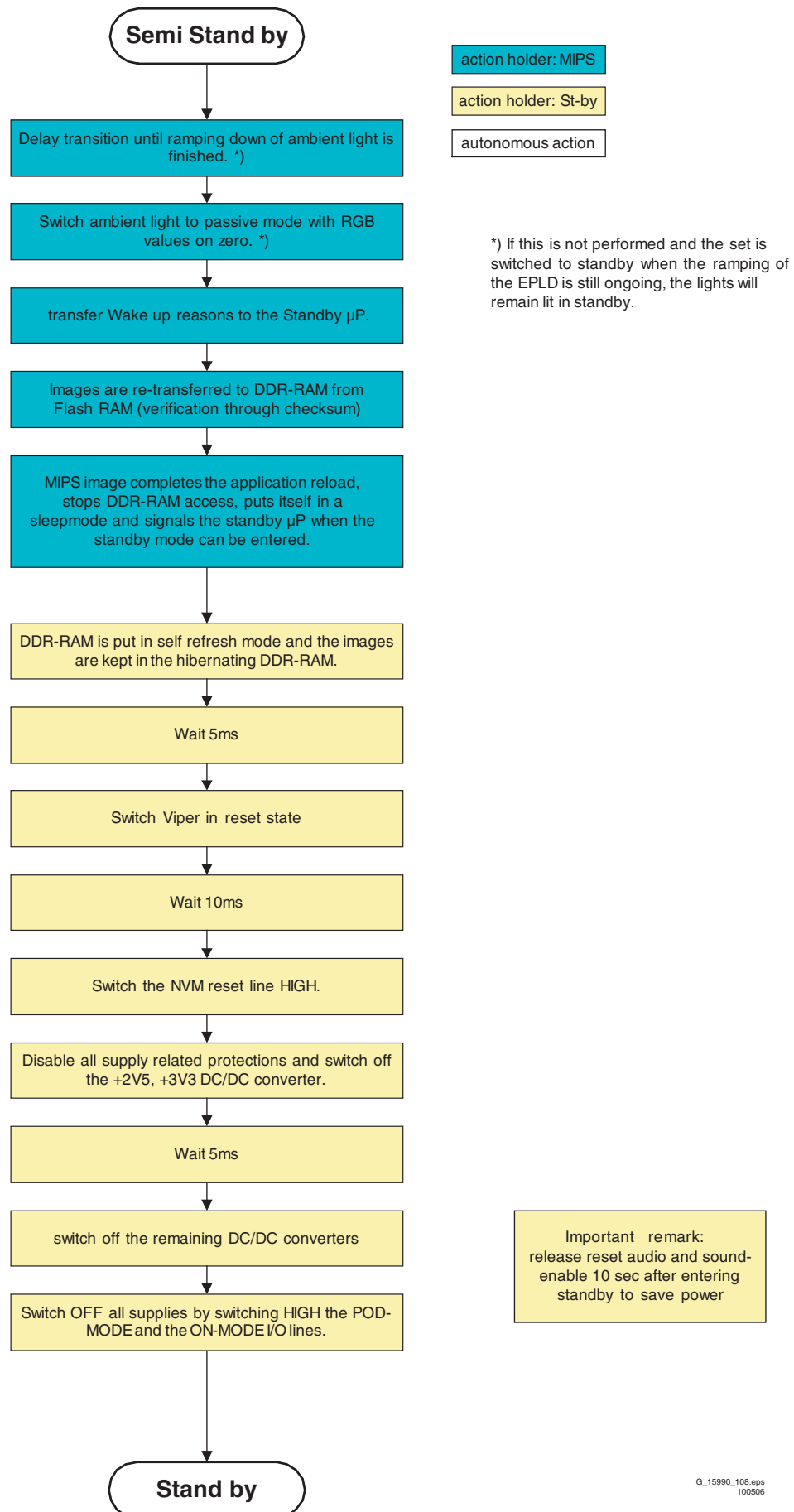


Figure 5-12 “Semi Stand-by” to “Stand-by” flowchart

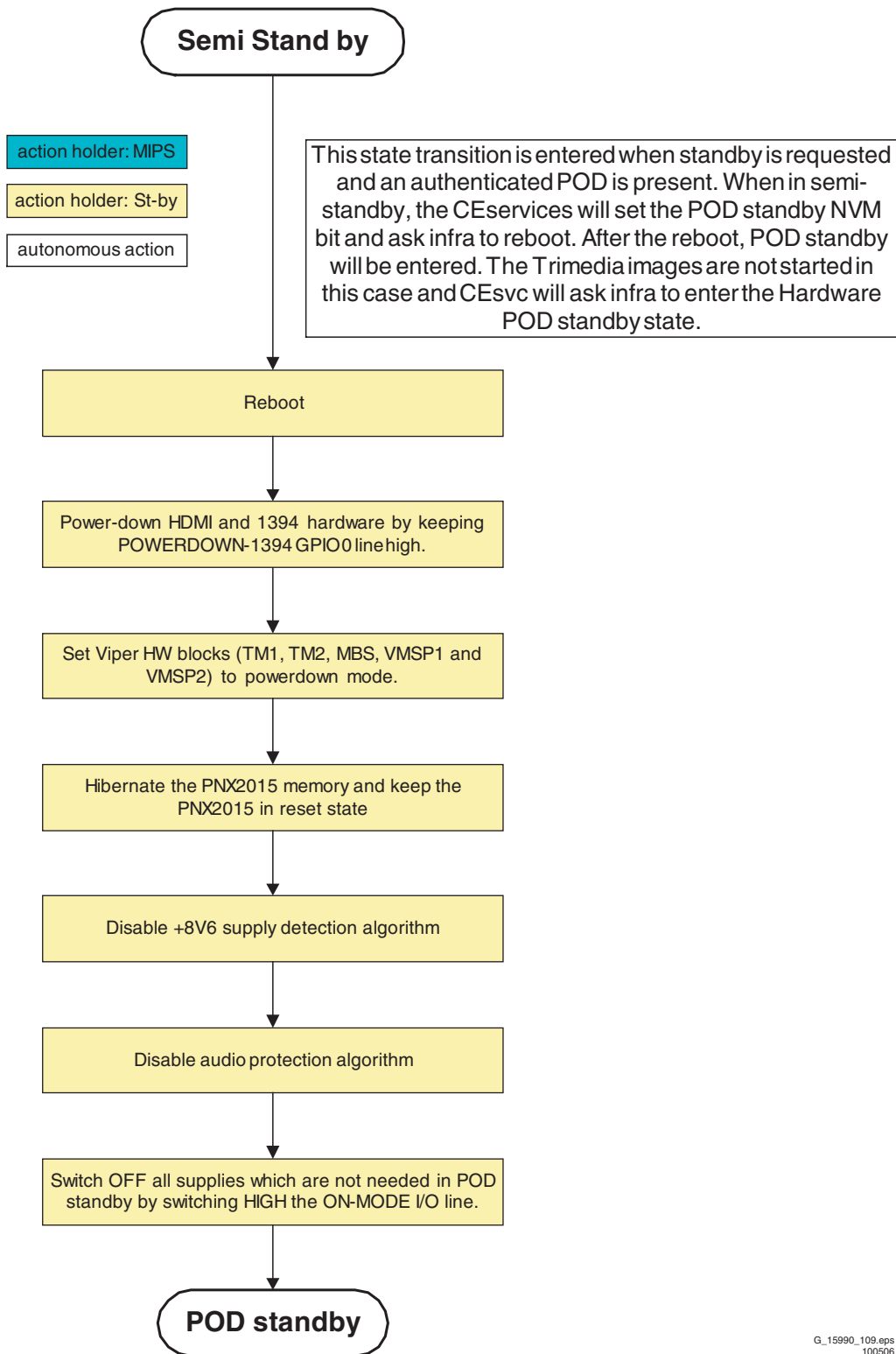


Figure 5-13 “Semi Stand-by” to “POD Stand-by” flowchart

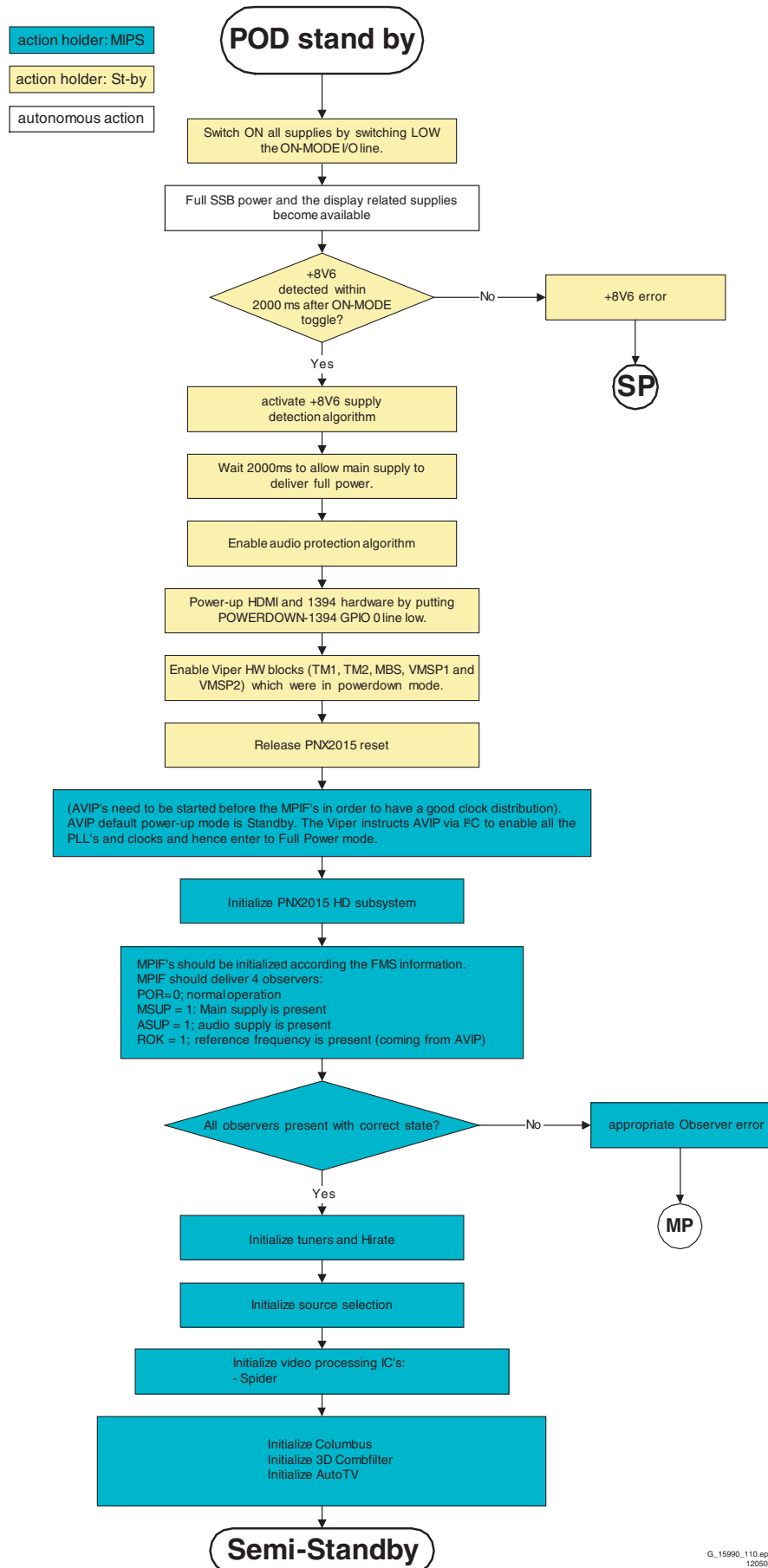


Figure 5-14 "POD Stand-by" to "Semi Stand-by" flowchart

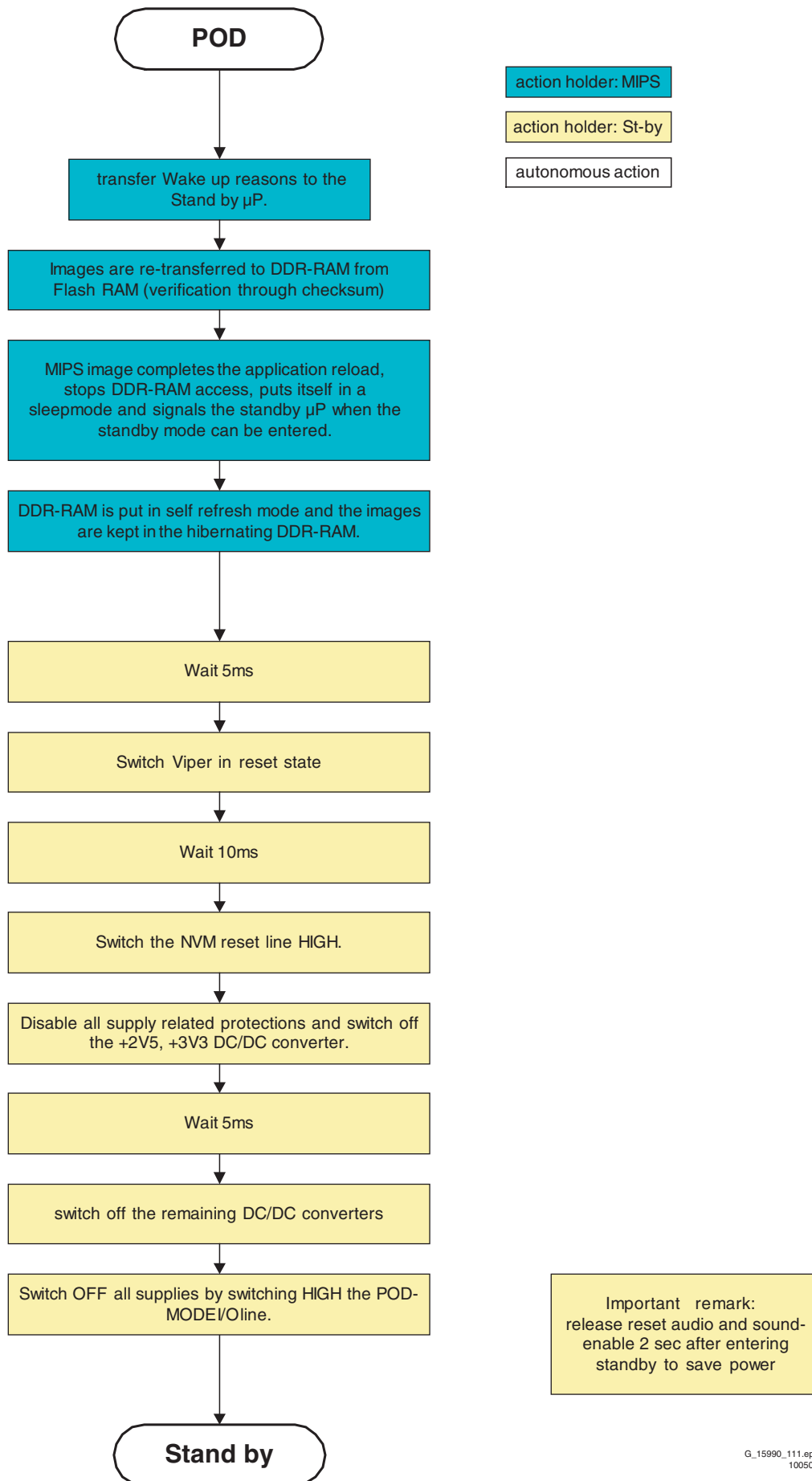


Figure 5-15 “POD” to “Stand-by” flowchart

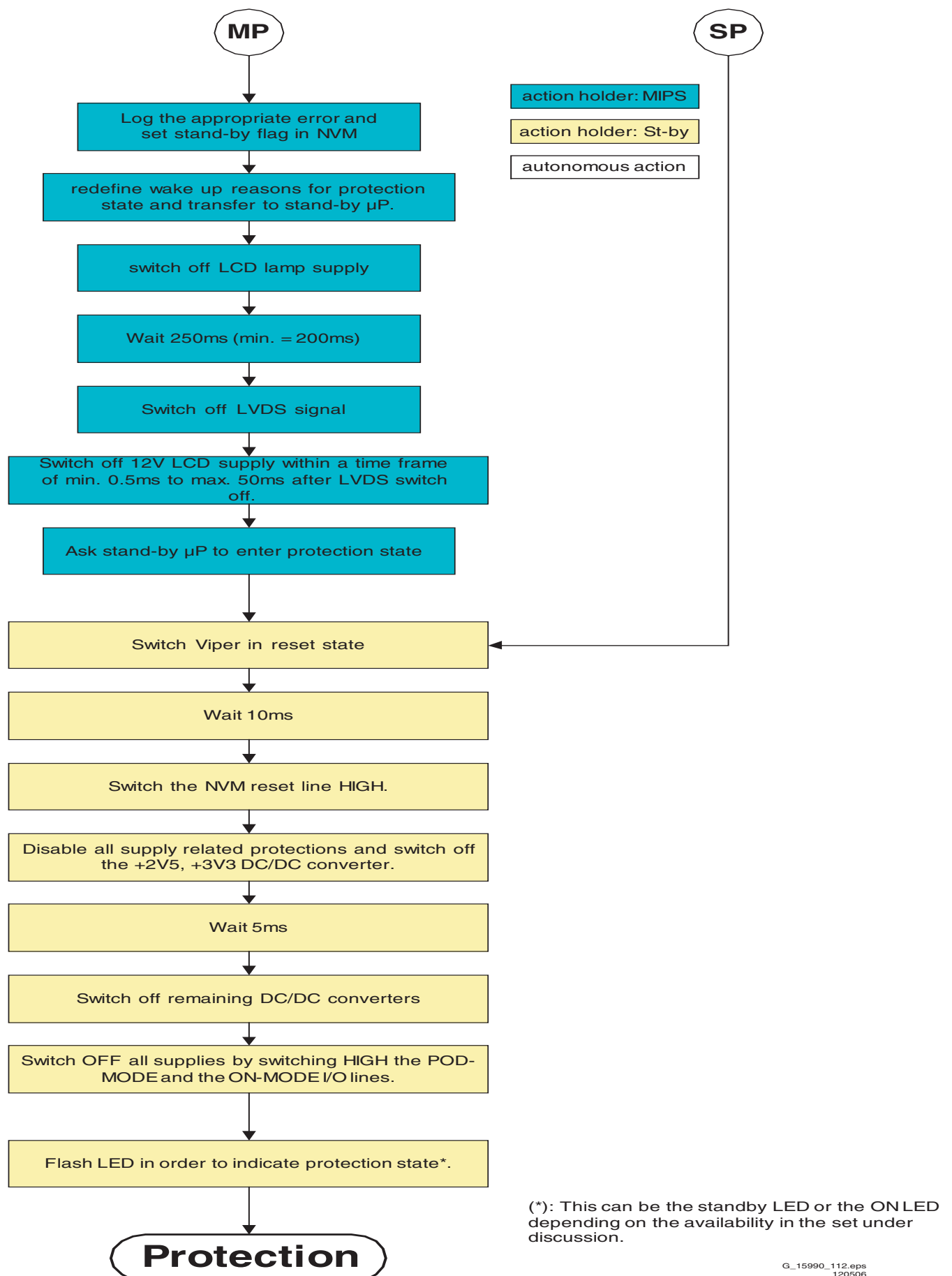


Figure 5-16 "Protection" flowchart

5.4 Service Tools

5.4.1 ComPair

Introduction

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the European DST (service remote control), which allows faster and more accurate diagnostics. ComPair has three big advantages:

1. ComPair helps you to quickly get an understanding on how to repair the chassis in a short time by guiding you systematically through the repair procedures.
2. ComPair allows very detailed diagnostics (on I²C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I²C commands yourself because ComPair takes care of this.
3. ComPair speeds up the repair time since it can automatically communicate with the chassis (when the microprocessor is working) and all repair information is directly available. When ComPair is installed together with the Force/SearchMan electronic manual of the defective chassis, schematics and PWBs are only a mouse click away.

Specifications

ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The ComPair interface box is connected to the PC via a serial (or RS-232) cable.

For this chassis, the ComPair interface box and the TV communicate via a bi-directional service cable via the service connector(s).

The ComPair fault finding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in two ways:

- Automatically (by communicating with the television): ComPair can automatically read out the contents of the entire error buffer. Diagnosis is done on I²C/UART level. ComPair can access the I²C/UART bus of the television. ComPair can send and receive I²C/UART commands to the microcontroller of the television. In this way, it is possible for ComPair to communicate (read and write) to devices on the I²C/UART buses of the TV-set.
- Manually (by asking questions to you): Automatic diagnosis is only possible if the microcontroller of the television is working correctly and only to a certain extent. When this is not the case, ComPair will guide you through the fault finding tree by asking you questions (e.g. *Does the screen give a picture? Click on the correct answer: YES / NO*) and showing you examples (e.g. *Measure test-point I7 and click on the correct oscillogram you see on the oscilloscope*). You can answer by clicking on a link (e.g. *text or a waveform picture*) that will bring you to the next step in the fault finding process.

By a combination of automatic diagnostics and an interactive question / answer procedure, ComPair will enable you to find most problems in a fast and effective way.

How to Connect

This is described in the chassis fault finding database in ComPair.

Caution: It is compulsory to connect the TV to the PC as shown in the picture below (with the ComPair interface in between), as the ComPair interface acts as a level shifter. If one connects the TV directly to the PC (via UART), ICs will be blown!

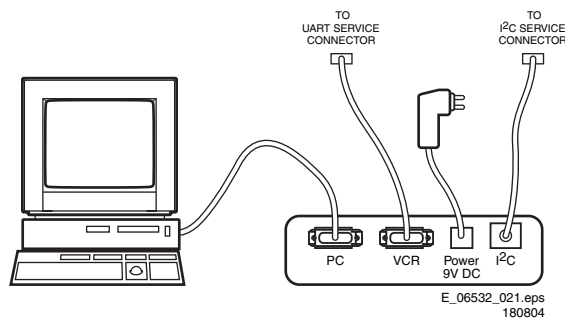


Figure 5-17 ComPair interface connection

How to Order

ComPair order codes (EU/AP/LATAM):

- Starter kit ComPair32/SearchMan32 software and ComPair interface (excl. transformer): 3122 785 90450.
- ComPair interface (excl. transformer): 4822 727 21631.
- Starter kit ComPair32 software (registration version): 3122 785 60040.
- Starter kit SearchMan32 software: 3122 785 60050.
- ComPair32 CD (update): 3122 785 60070 (year 2002), 3122 785 60110 (year 2003 onwards).
- SearchMan32 CD (update): 3122 785 60080 (year 2002), 3122 785 60120 (year 2003), 3122 785 60130 (year 2004).
- ComPair firmware upgrade IC: 3122 785 90510.
- Transformer (non-UK): 4822 727 21632.
- Transformer (UK): 4822 727 21633.
- ComPair interface cable: 3122 785 90004.
- ComPair interface extension cable: 3139 131 03791.
- ComPair UART interface cable: 3122 785 90630.

ComPair order codes (US):

- ComPair Software: ST4191.
- ComPair Interface Box: 4822 727 21631.
- AC Adapter: T405-ND.
- ComPair Quick Start Guide: ST4190.
- ComPair interface extension cable: 3139 131 03791.
- ComPair UART interface cable: 3122 785 90630.

Note: If you encounter any problems, contact your local support desk.

5.4.2 LVDS Tool

Introduction

This service tool (also called "ComPair Assistant 1") may help you to identify, in case the TV does not show any picture, whether the Small Signal Board (SSB) or the display of a Flat TV is defective.

Furthermore it is possible to program EPLDs with this tool (Byte blaster). Read the user manual for an explanation of this feature.

Since 2004, the LVDS output connectors in our Flat TV models are standardised (with some exceptions). With the two delivered LVDS interface cables (31p and 20p) you can cover most chassis (in special cases, an extra cable will be offered).

When operating, the tool will show a small (scaled) picture on a VGA monitor. Due to a limited memory capacity, it is not possible to increase the size when processing high-resolution LVDS signals (> 1280x960). Below this resolution, or when a DVI monitor is used, the displayed picture will be full size.

Generally this tool is intended to determine if the SSB is working or not. Thus to determine if LVDS, RGB, and sync signals are okay.

How to Connect

Connections are explained in the user manual, which is packed with the tool.

Note: To use the LVDS tool, you must have ComPair release 2004-1 (or later) on your PC (engine version >= 2.2.05). For every TV type number and screen size, one must choose the proper settings via ComPair. The ComPair file will be updated regularly with new introduced chassis information.

How to Order

- LVDS tool (incl. two LVDS cables: 31p and 20p):
3122 785 90671.
- LVDS tool Service Manual:
3122 785 00810.
- LVDS cable 31p/FI -> 31p/FI (for JL2.1 chassis):
3122 785 90861.
- LVDS cable 30p/DF -> 31p/FI (for LC4.3 chassis):
3122 785 90821.
- LVDS cable 41p/FI -> 31p/FI (dual -> single LVDS):
3122 785 90831.
- LVDS cable 20p/DF -> 20p/DF (standard with tool):
3122 785 90731.
- LVDS cable 31p/FI -> 31p/FI (standard with tool):
3122 785 90662.
- LVDS cable 20p/DF -> 20p/DF (for LC4.1 chassis):
3122 785 90851.

5.5 Error Codes**5.5.1 Introduction**

The error code buffer contains all detected errors since the last time the buffer was erased. The buffer is written from left to right, new errors are logged at the left side, and all other errors shift one position to the right.

When an error occurs, it is added to the list of errors, provided the list is not full. When an error occurs and the error buffer is full, then the new error is not added, and the error buffer stays intact (history is maintained), except when the error is a protection error.

To prevent that an occasional error stays in the list forever, the error is removed from the list after more than 50 hrs. of operation.

When multiple errors occur (errors occurred within a short time span), there is a high probability that there is some relation between them.

Basically there are three kinds of errors:

- **Errors detected by the Stand-by Processor.** These errors will always lead to protection and an automatic start of the blinking LED for the concerned error (see paragraph "The Blinking LED Procedure"). In these cases SDM can be used to start up (see chapter "Stepwise Start-up"). Note that it can take up to 90 seconds before the TV goes to protection and starts blinking the error (e.g. error 53)

- **Errors detected by VIPER that lead to protection.** In this case the TV will go to protection and the front LED should also blink the concerned error. Depending on the software version it is possible that this mechanism does not work. See also paragraph "Error Codes" -> "Error Buffer" -> "Extra Info".
- **Errors detected by VIPER that do not lead to protection.** In this case the error will be logged into the error buffer and can be read out via ComPair, via blinking LED method, or in case you have picture, via SAM.

5.5.2 How to Read the Error Buffer

Use one of the following methods:

- On screen via the SAM (only if you have a picture). E.g.:
 - **00 00 00 00 00:** No errors detected
 - **06 00 00 00 00:** Error code 6 is the last and only detected error
 - **09 06 00 00 00:** Error code 6 was first detected and error code 9 is the last detected error
- Via the blinking LED procedure (when you have no picture). See next paragraph.
- Via ComPair.

5.5.3 How to Clear the Error Buffer

Use one of the following methods:

- By activation of the "RESET ERROR BUFFER" command in the SAM menu.
- With a normal RC, key in sequence "MUTE" followed by "062599" and "OK".
- If the content of the error buffer has not changed for 50+ hours, it resets automatically.

5.5.4 Error Buffer

In case of non-intermittent faults, clear the error buffer before you begin the repair (**before** clearing the buffer, write down the content, as this history can give you significant information). This to ensure that old error codes are no longer present. If possible, check the entire contents of the error buffer. In some situations, an error code is only the result of another error code and not the actual cause (e.g., a fault in the protection detection circuitry can also lead to a protection).

There are several mechanisms of error detection:

- Via error bits in the status registers of ICs.
- Via polling on I/O pins going to the stand-by processor.
- Via sensing of analogue values on the stand-by processor or the Viper.
- Via a "not acknowledge" of an I²C communication

Take notice that some errors need more than 90 seconds before they start blinking. So in case of problems wait 2 minutes from start-up onwards, and then check if the front LED is blinking.

Table 5-3 Error code overview

Error	Description	Error/Prot	Detected by	Device	Defective module	Result
1	I ² C1	P	VIPER	/	I ² C1_blocked	Protection + Error blinking
2	I ² C2	E	VIPER	/	I ² C2_blocked	Error logged
3	I ² C3	P	Stby μP	/	/	Protection + Error blinking
4	I ² C4	E	VIPER	/	I ² C4_blocked	Protection + Error blinking
5	VIPER does not boot	P	Stby μP	PNX8550	/	Protection + Error blinking
6	5V supply	P	Stby μP	/	/	Protection + Error blinking
7	8V6 supply	P	Stby μP	/	/	Protection + Error blinking
8	1.2V DC/DC	P	Stby μP	/	/	Protection + Error blinking
9	2.5V DC/DC	P	Stby μP	/	/	Protection + Error blinking
11	3.3V DC/DC	P	Stby μP	/	/	Protection + Error blinking
12	12V supply	P	Stby μP	/	/	Protection + Error blinking
14	Audio	P	Stby μP	/	/	Protection + Error blinking

Error	Description	Error/Prot	Detected by	Device	Defective module	Result
18	MPIF1 ref. freq.	E	VIPER	PNX3000	IF I/O	Error logged
23	MPIF2 ref. freq.	E	VIPER	PNX3000	IF I/O 2	Error logged
25	Supply fault	P	Stby μ P	n.a.	/	Protection + Error blinking
27	PNX2015 HD subsystem part	E	VIPER	/	/	see extra info
28	MOP	E	VIPER	/	/	see extra info
32	MPIF1	E	VIPER	PNX3000	Analog 1 front end 1	Error logged
33	MPIF2	E	VIPER	PNX3000	Analog 2 front end 2	Error logged
34	Tuner1	E	VIPER	/	Tuner 1	Error logged
35	Tuner sub	E	VIPER	/	Tuner sub	Error logged
36	OFDM (channel decoder)	E	VIPER	TDA10046	/	Error logged
39	POD/Common Interface	E	VIPER	STV0701	/	Error logged
43	Hi Rate Front End	E	VIPER	TDA9975	HDMI	Error logged
44	NVM	P	Stby μ P	/	/	see extra info
45	Columbus 1	E	VIPER	PNX2015	Comb filter	Error logged
46	Pacific 3	E	VIPER	/	/	TV to standby + Error logged
53	VIPER	P	Stby μ P	PNX8550	/	Protection + Error blinking
63	Power OK	P	VIPER	/	/	Protection + Error blinking (see extra info)
64	Display	E	VIPER	/	/	Error logged

Extra Info

- **Rebooting.** When a TV is constantly rebooting due to internal problems, most of the time no errors will be logged or blinked. This rebooting can be recognised via a ComPair interface and Hyperterminal (for Hyperterminal settings, see paragraph "Stand-by software upgrade). You will see that the loggings which are generated by the main software keep continuing. In this case (rebooting) diagnose has to be done via ComPair.
- **Error 1 (I²C bus 1 blocked).** When this error occurs, the TV will go to protection and the front LED will blink error 1. Now you can start up the TV via the SDM short-cut pins on the SSB. The TV will start up and ignore the error. Depending on the problem it is even possible that you have picture.
- **Error 2 (I²C bus 2 blocked).** Due to hardware restriction (I²C bus 2 is the fast I²C bus) it will be impossible to start up the VIPER when I²C bus 2 is blocked. When this error occurs, the TV will keep rebooting. Starting up the TV via the SDM short-cut pins will not work. So it will not be possible to read out error 2 via internal software (although it will be logged). Use ComPair for further diagnose (e.g. read out the NVM content).
- **Error 3 (I²C bus 3 blocked).** There are only three devices on I²C bus 3: VIPER, Stand-by Processor, and NVM. The Stand-by Processor is the detection device of this error, so this error will only occur if the VIPER or the NVM is blocking the bus. This error will also blink when the NVM gives no acknowledge on the I²C bus. Note that if the 12 V supply is missing, the DC/DC supply on the SSB will not work. Therefore the VIPER will not get supplies and could block I²C bus 3. So, a missing 12 V can also lead to an error 3.
- **Error 4 (I²C bus 4 blocked).** In this chassis, error 4 is no longer a protection error.
- **Error 5 (VIPER does not boot).** This error will point to a severe hardware problem around the VIPER (supplies not OK, VIPER completely dead, I²C link between VIPER and Stand-by Processor broken, etc...).
- **Error 7 (8V6 error).** In case of a TV with SDI display you will see error 7 blink in case of an audio protection. So except a problem with the 8V6 itself it is also possible that there is something wrong with the audio part. See also paragraph "Hardware Protections" for this.
- **Error 14 (Audio protection).** The detection is done on the audio board itself. Several items are monitored: overvoltage, overcurrent, DC level on the speakers and the audio supply voltages. If one of these items fails, the audioprotection will switch off the main supply. All supplies will drop, the standby processor "thinks" there is a mains dip, and will reboot. At the beginning of the boot process, the audio-protection line is monitored : if this line is "active", the set will go to protection and will blink error 14.
- **Error 27 (PNX2015 HD subsystem part).** Diagnosing this error will not be possible via the normal errorcodes. In case

this device can not communicate with the Viper via I²C, it will not be possible to initialise the tunnelbus. Hence the software will not be able to start up, and will re-boot constantly. Diagnosing these problems will only be possible via ComPair. In theory it is possible that the error is logged in the NVM (that's why this error is still mentioned here).

- **Error 28 (MOP/EPLD)** Due to the detection mechanism of the MOP error it is possible that the actual logging of the error can take up to 4 minutes (worst case). So if you want to be sure there is a MOP error, reset the error buffer, restart the TV and wait for 4 minutes before checking the error buffer again. The detection mechanism for this error has been changed to avoid false MOP errors.
- **Error 44 (NVM).** This error will probably never occur because it is masked by error 3 (I²C bus 3). The detection mechanism for error 3 checks on an I²C acknowledge of the NVM. If NVM gives no acknowledge, the stand-by software assumes that the bus is blocked, the TV goes to protection and error 3 will be blinking..
- **Error 46 (Pacific 3).** When this errors occurs the TV will go to stand-by. The reason for this is, when there is an occasional boot problem of the Pacific, it will look like the TV has started up in stand-by mode, and the customer can switch it on again. When there is an actual problem with or around the Pacific the TV will go to stand-by every time you try to start up. So this behaviour is an indication of a Pacific problem.
- **Error 53.** This error will indicate that the VIPER has started to function (by reading his boot script, if this would have failed, error 5 would blink) but initialization was never completed because of hardware peripheral problems (NAND flash, ...) or software initialization problems. Possible cause could be that there is no valid software loaded (try to upgrade to the latest main software version). Note that it takes 90 seconds before the TV goes to protection in this case.
- **Error 63 (POWER OK).** When this error occurs, it means that the POWER-OK line did not became "high". This error is only applicable for TV's with a SDI display, a FHP display or a Sharp full HD display. Depending on the software version it is possible that the detection mechanism of this error does not function and that the set keeps rebooting.
- **Error 64 (Display error).** When this error occurs it means that there is a problem with the I²C communication towards the display. Although several display types communicate via I²C, this error will only work for sets with a FHP display.

5.6 The Blinking LED Procedure

5.6.1 Introduction

The blinking LED procedure can be split up into two situations:

- Blinking LED procedure in case of a protection detected by the stand-by processor. In this case the error is automatically blinked. This will be only one error, namely the one that is causing the protection. Therefore, you do not have to do anything special, just read out the blinks. A long blink indicates the decimal digit, a short blink indicates the units.
- Blinking LED procedure in the "on" state. Via this procedure, you can make the contents of the error buffer visible via the front LED. This is especially useful for fault finding, when there is no picture.

When the blinking LED procedure is activated in the "on" state, the front LED will show (blink) the contents of the error-buffer. Error-codes > 10 are shown as follows:

1. "n" long blinks (where "n" = 1 - 9) indicating decimal digit,
2. A pause of 1.5 s,
3. "n" short blinks (where "n" = 1 - 9),
4. A pause of approx. 3 s.
5. When all the error-codes are displayed, the sequence finishes with a LED blink of 3 s,
6. The sequence starts again.

Example: Error 12 8 6 0 0.

After activation of the SDM, the front LED will show:

1. 1 long blink of 750 ms (which is an indication of the decimal digit) followed by a pause of 1.5 s,
2. 2 short blinks of 250 ms followed by a pause of 3 s,
3. 8 short blinks followed by a pause of 3 s,
4. 6 short blinks followed by a pause of 3 s,
5. 1 long blink of 3 s to finish the sequence,
6. The sequence starts again.

5.6.2 How to Activate

Use one of the following methods:

- **Activate the SDM.** The blinking front LED will show the entire contents of the error buffer (this works in "normal operation" mode).
- **Transmit the commands "MUTE" - "062500" - "OK" with a normal RC.** The complete error buffer is shown. Take notice that it takes some seconds before the blinking LED starts.
- **Transmit the commands "MUTE" - "06250x" - "OK" with a normal RC** (where "x" is a number between 1 and 5). When x= 1 the last detected error is shown, x= 2 the second last error, etc.... Take notice that it takes some seconds before the blinking LED starts.

5.7 Protections

5.7.1 Software Protections

Most of the protections and errors use either the stand-by microprocessor or the VIPER controller as detection device. Since in these cases, checking of observers, polling of ADCs, filtering of input values are all heavily software based, these protections are referred to as software protections. There are several types of software related protections, solving a variety of fault conditions:

- **Protections related to supplies:** check of the 12V, +5V, +8V6, +1.2V and +3.3V.
- **Protections related to breakdown of the safety check mechanism.** E.g. since a lot of protection detections are done by means of the VIPER, failing of the VIPER communication will have to initiate a protection mode since safety cannot be guaranteed any more.

Remark on the Supply Errors

The detection of a supply dip or supply loss during the normal playing of the set does not lead to a protection, but to a cold reboot of the set. If the supply is still missing after the reboot, the set will go to protection.

Protections during Start-up

During start-up, some voltages and IC observers are actively monitored to be able to optimise the start-up speed, and to assure good operation of all components. If these monitors do not respond in a defined way, this indicates a malfunction of the system and leads to a protection. As the observers are only used during start-up, they are described in the start-up flow in detail (see paragraph "Stepwise Start-up").

5.7.2 Hardware Protections

There are no real hardware protections in this chassis..

Although, in case of an audio problem, the audio protection circuit will switch off the main supply. The stand-by microprocessor will interpretate this as a mains dip and will try to start up again.

In case of a set with SDI display this will probably lead to protection error 7 (8V6 error) and an internal error 11 (so it looks like an overvoltage protection of the SDI supply itself). In other cases it will lead to error 14 (audio protection).

Repair Tips

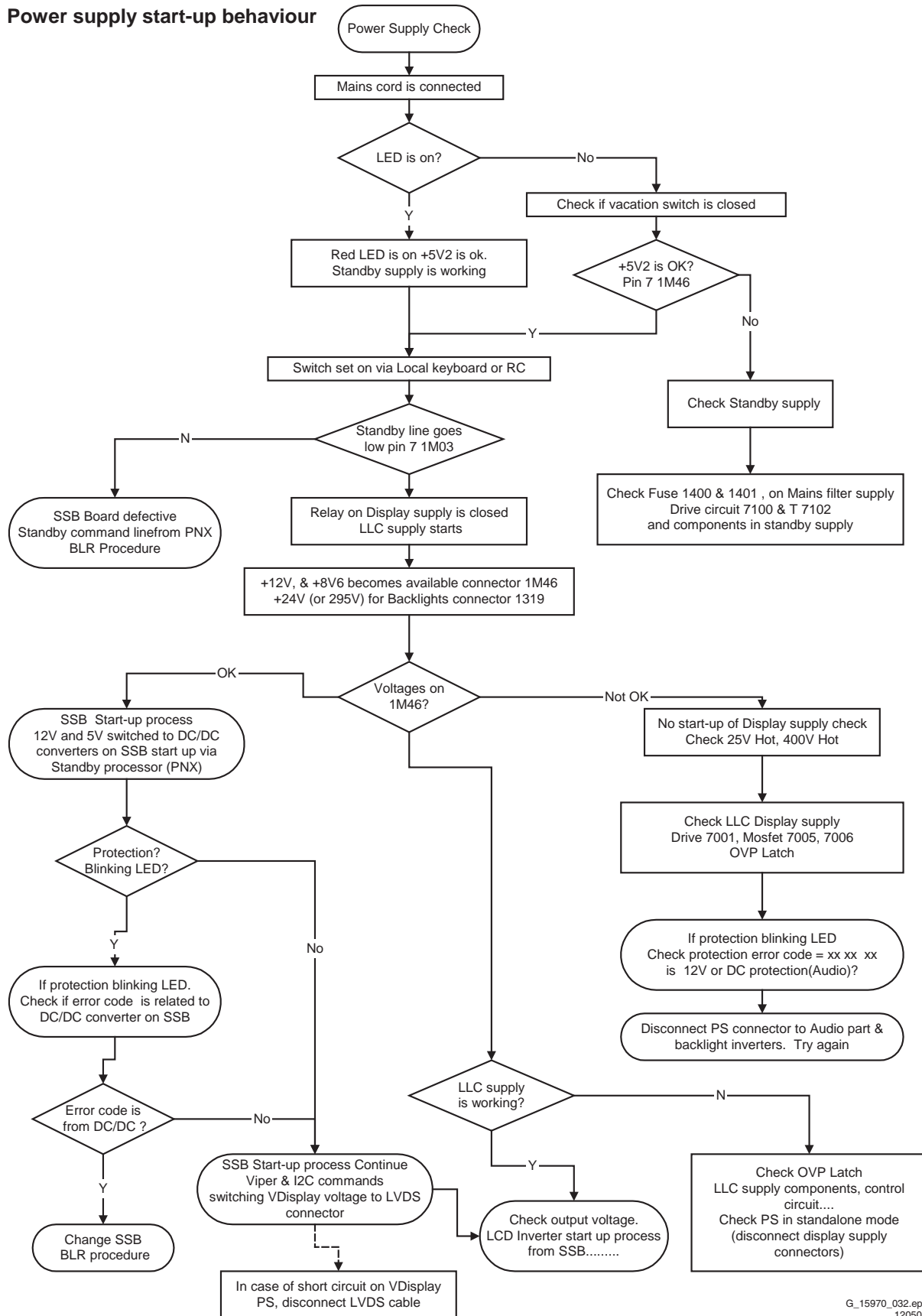
- It is also possible that you have an audio DC protection because of an interruption in one or both speakers (the DC voltage that is still on the circuit cannot disappear through the speakers).

5.8 Fault Finding and Repair Tips

Read also paragraph "Error Codes" - "Extra Info".

32" LCD

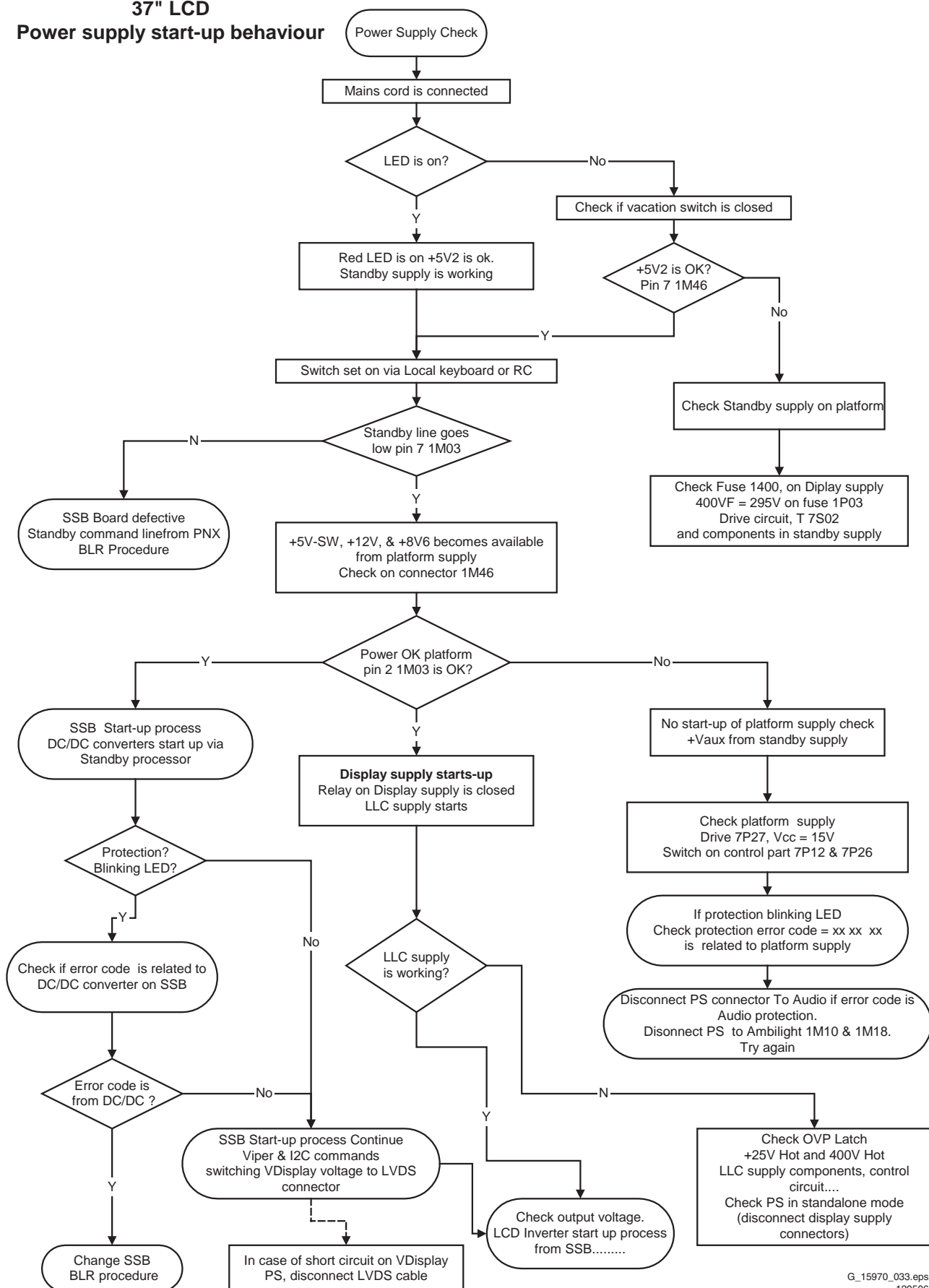
Power supply start-up behaviour



G_15970_032.eps
120506

Figure 5-18 First line fault find tree 32" LCD

37" LCD Power supply start-up behaviour



G_15970_033.eps
120506

Figure 5-19 First line fault find tree 37" LCD

5.8.1 Exit "Factory Mode"

When an "F" is displayed in the screen's right corner, this means that the set is in "Factory" mode, and it normally happens after a new SSB has been mounted. To exit this mode, push the "VOLUME minus" button on the TV's keyboard control for 5 seconds and restart the set.

When a DVBT set starts up in factory mode, the set will tune to preset 0. When there is no channel installed on preset 0, there will be no picture and it will look like the set is in standby mode. De-activating factory mode can also be done via the above method.

5.8.2 MPIF

Important things to make the MPIF work:

- Supply.
- Clock signal from the AVIP.
- I²C from the VIPER.

When there is no sound an external sources, check the audio supply of the MPIF.

5.8.3 PACIFIC 3

In case the Pacific fails, the set will go to stand-by. The reason for this is, when there is an occasional boot problem of the Pacific, it will look like the set has started up in stand-by mode, and the customer can switch it "on" again. When there is an actual problem with or around the Pacific the set will go to stand-by every time you try to start up. So this behaviour is an indication of a Pacific problem.

5.8.4 Ambilight

Note: in case of Ambilight protection, the set itself will not go to protection, only the Ambilight board. When you disconnect the set from the mains and reconnect again, the Ambilights will work again.

In case of multiple protections, check and replace the inverter transformers and/or the lamp unit(s).

Protections on the ambilight boards:

- **Parallel arcing protection.** In normal operation the inverter frequency is ± 63 kHz. In case of short circuit of the transformer output the frequency is >100 kHz. Protection is done via sensing the switching frequency.
- **Serial arcing protection.** The detection of the arcing is done in the ground wire of lamp units. The μ Processor is counting the protection pulses. When 50 pulses are counted within 2 seconds protection will be triggered.

5.8.5 Sanken display supply.

All 42" LCD sets for this chassis have a Sanken display supply. If this supply fails there will be no error or protection because there is no feedback foreseen from the supply towards the SSB. The result of a failing Sanken display supply could be that there is no picture, but that you will probably have sound and 1 out of 3 ambilights will still work (in case ambilight is switched "on").

Another result of a failing Sanken display is of course that the set is completely dead.

When the primary circuit of the platform supply fails, there is a high possibility that the main fuse of the Sanken display supply will break. In this case the Sanken supply must not be replaced completely. That fuse can be ordered separately (see partslist). For safety reasons, make sure to use the correct fuse type.

5.8.6 DC/DC Converter

Introduction

- Because IC's on the SSB require low supply voltages (1.2V, 2.6V, 3.3V) at high current (a few Ampères), on-board DC-DC converters were implemented:
 - 12V / 1V2 DC-DC converter
 - extra 12V / 1V2 DC-DC converter for FPGA (only on 1080p boards)
 - 12V / 2V6 DC-DC converter
 - 12V / 3V3 DC-DC converter
 - Vtun (+33V) generator (not for single window digital boards)
- Startup sequence:

Apply +5V2. The standby microprocessor will begin the start sequence.

 - the STANDBY signal will go low to enable the external supply that will deliver +12V, +8V6 and +5V to the SSB via connector 1M46
 - As soon as the +12V has its nominal value, the 12V / 1V2 DC-DC converter is enabled via ENABLE 1V2. +1V2 should have its nominal value within milliseconds.
 - If the +1V2 is ok the 12V / 2V5, 12V / 3V3 DC-DC converters (and the Vtun generator and 12V / 1V2 DC-DC converter for FPGA, if present) are enabled via ENABLE 2V5 and ENABLE 3V3. +2V5 and +3V3 (and Vtun and +1V2-FPGA, if it is the case) should have their nominal values within a few milliseconds.
- There are LEDs that light up when +1V2, +2V5, +2V5D and +3V3 are available.
- If the +12V is not available the start-up sequence is stopped and the board enters in protection state.
- The same will happen if, further in the start-up sequence a voltage is missing or the signal SUPPLY-FAULT remains low.
- The signal SUPPLY-FAULT should be high ($>2V$) when all DC-DC converters are working properly. The signal is becoming active (low) when there is a defective or missing component in any of the three DC-DC converters or the output voltages are short-circuited to ground.

Fault Finding

- The best way to find a failure in the DC-DC converters is to check their start-up sequence at power on via the mains cord, presuming that the standby μ P is operational.
- If the input voltage of the DC-DC converters is around 12V (measured on the decoupling capacitors 2U17, 2U25 and 2U45) and the enable signals are low (active) then the output voltages should have their nominal values.
- In case of a wrong value of the output voltages (or no output voltage):
 - Check the value of the signals (STANDBY, ENABLE 1V2, ENABLE 2V5, ENABLE 3V3 and SUPPLY-FAULT)
 - Check the value of the supply voltages for the IC controllers (pin 15 of IC's 7U04, 7U05, 7U06 and 7U64 must be +12V)
 - Check the switching frequency (250 kHz) and the duty cycle of each DC-DC converter
 - Check short-circuits to GND of output voltages

5.9 Software Upgrading

5.9.1 Introduction

The set software and security keys are stored in a NAND-Flash, which is connected to the VIPER via the PCI bus.

It is possible **for the user** to upgrade the **main** software via the USB port. This allows replacement of a software image in a stand alone set, without the need of an E-JTAG debugger. A description on how to upgrade the main software can be found in chapter 3 "Directions For Use".

Important: When the NAND-Flash must be replaced, a new SSB must be ordered, due to the presence of the security keys!!! (copy protection keys, MAC address, for US the POD keys, ...). See table "SSB service kits" for the order codes. Perform the following actions after SSB replacement:

1. Set the correct option codes (see sticker inside the TV).
2. Update the TV software (see chapter 3 for instructions).
3. Perform the alignments as described in chapter 8.
4. Check in CSM if the HDMI keys are valid.

Table 5-4 SSB service kits

Model Number	SSB factory assy code ¹⁾	New SSB order code
32PF9531/10	3104 328 46631	3104 328 46821
32PF9631D/10	3104 328 46691	3104 328 46811
32PF9731D/10	3104 328 44071	3104 328 46801
37PF9731/69	3104 328 44061	3104 328 46791
37PF9731D/10	3104 328 44061	3104 328 46791
42PF9731D/10	info not available at time of printing	
42PF9831/69	3104 328 44052	3104 328 46781
42PF9831D/10	3104 328 44052	3104 328 46781

1) Information in column "SSB factory assy code" is only for reference purposes. Do **not** use this code when ordering a new SSB.

5.9.2 Main Software Upgrade

The software image resides in the NAND-Flash, and is formatted in the following way:

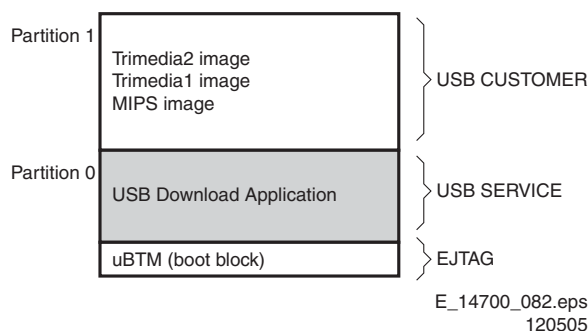


Figure 5-20 NAND-Flash format

Executables are stored as files in a file system. The boot loader (uBTM) will load the USB Download Application in partition 0 (USB drivers, boot script, etc.). This application makes it then possible to upgrade the main software via USB.

Installing "Partition 0" software is possible via an external EJTAG tool, but also in a special way with the USB stick (see description in paragraph "Partition 0").

Partition 1 (Customer)

To do a main software upgrade (partition 1) via USB, the set must be operational, and the "Partition 0" files for the VIPER **must** be installed in the NAND-Flash!

The new software can be uploaded to the set by using a portable memory device or USB storage compliant devices (e.g. USB memory stick). You can download the new software from the Philips website to your PC.

Partition 0 (Service)

If the "Partition 0" software is corrupted, the software needs to be re-installed.

To upgrade this "USB download application" (partition 0 except the boot block), insert an USB stick with the correct software, and press the "red" button on the remote control (in "TV" mode) when it is asked via the on screen text.

Caution:

- The USB download application will now erase **both** partitions (except the boot block), so you need to reload the main SW after upgrading the USB download application. As long as this is not done, the USB download application will start when the set is switched "on".
- When something goes wrong during the progress of this method (e.g. voltage dip or corrupted software file), the set will not start up, and can only be recovered via the EJTAG tool!

5.9.3 Manual Start of the Software Upgrade Application

Normally, the software upgrading procedure will start automatically, when a memory device with the correct software is inserted, but in case this does not work, it is possible to force the TV into the software upgrade application. To do so:

- Disconnect the TV from the Mains/AC Power.
- Press the "OK" button on a Philips DVD RC-6 remote control (it is also possible to use the TV remote in "DVD" mode).
- Keep the "OK" button pressed while connecting the TV to the Mains/AC Power.
- The software upgrade application will start.
- When a memory device with upgrade software is connected, the upgrade process will start.

5.9.4 Stand-by Software Upgrade

There are two methods now to upgrade stand-by software:

Upgrade via USB

In this chassis it is possible to upgrade stand-by software via a USB stick. The method is similar to upgrading main software via USB.

Use the following steps:

1. create a directory "upgrades" on your USB stick.
2. Copy the stand-by software (delivered via the Service organisation) into this directory.
3. Insert the USB stick into the TV.
4. Start the download application manually (see paragraph "Manual start of the Software Upgrade Application".
5. Select the appropriate file and press the red button to upgrade:

Upgrade via PC and ComPair interface

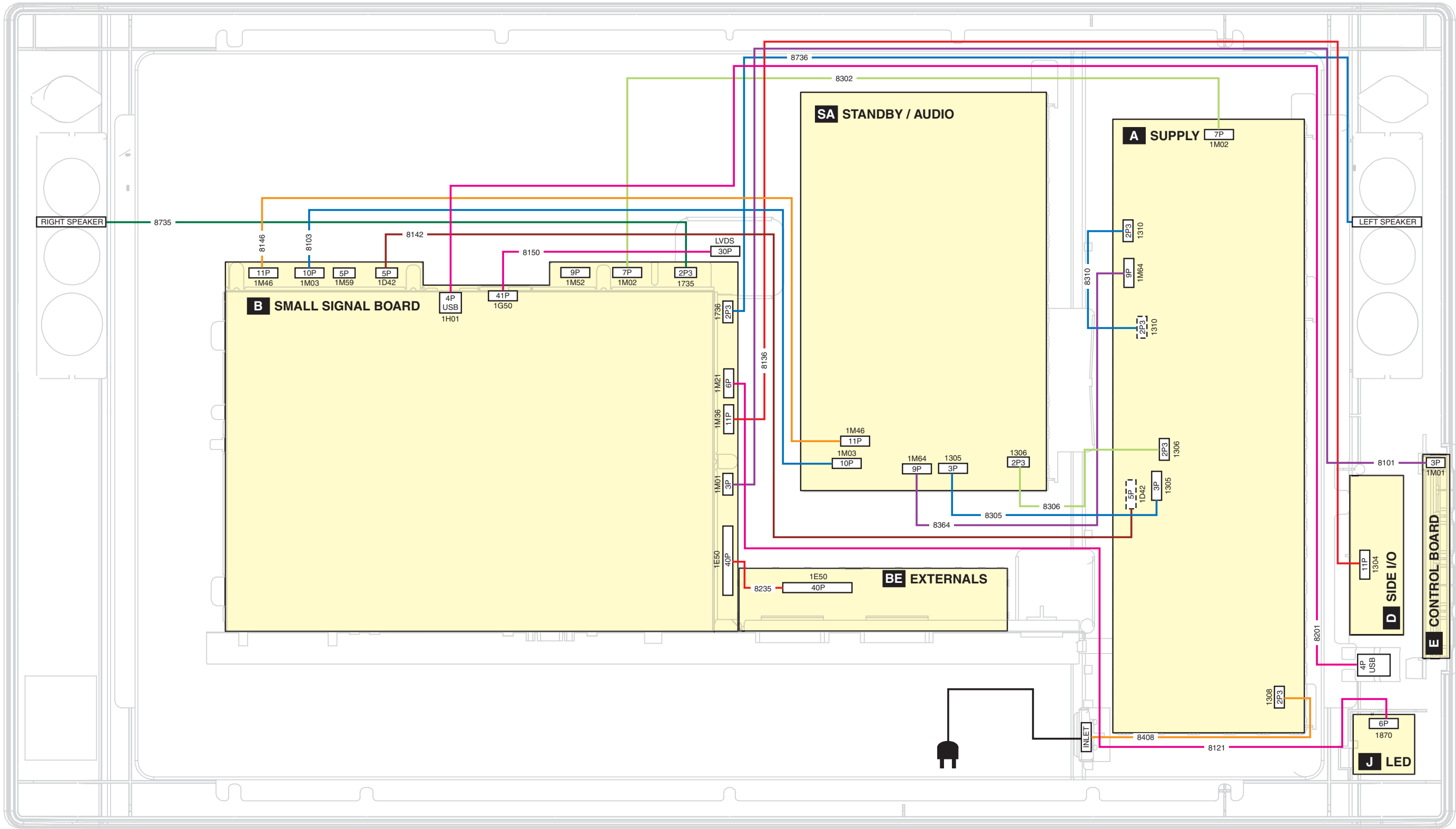
It is possible to upgrade the Stand-by software via a PC and the ComPair interface. Check paragraph "ComPair" on how to connect the interface. To upgrade the Stand-by software, use the following steps:

1. Disconnect the TV from the Mains/AC Power.
2. Short circuit the SPI pins [2] on the SSB. They are located outside the shielding (see figure "Service mode pads").
3. Keep the SPI pins shorted while connecting the TV to the Mains/AC Power.
4. Release the short circuit after approx. two seconds.
5. Start up HyperTerminal (can be found in every Windows application via Programs -> Accessories -> Communications -> HyperTerminal. Use the following settings:
 - COM1
 - Bits per second = 38400
 - Data bits = 8
 - Parity = none
 - Stop bits = 1
 - Flow control = Xon / Xoff.
6. Press "Shift U" on your PC keyboard. You should now see the following info:
 - PN2015 Loader V1.0
 - 19-09-2003
 - DEVID=0x05
 - Erasing
 - MCSUM=0x0000
 - =

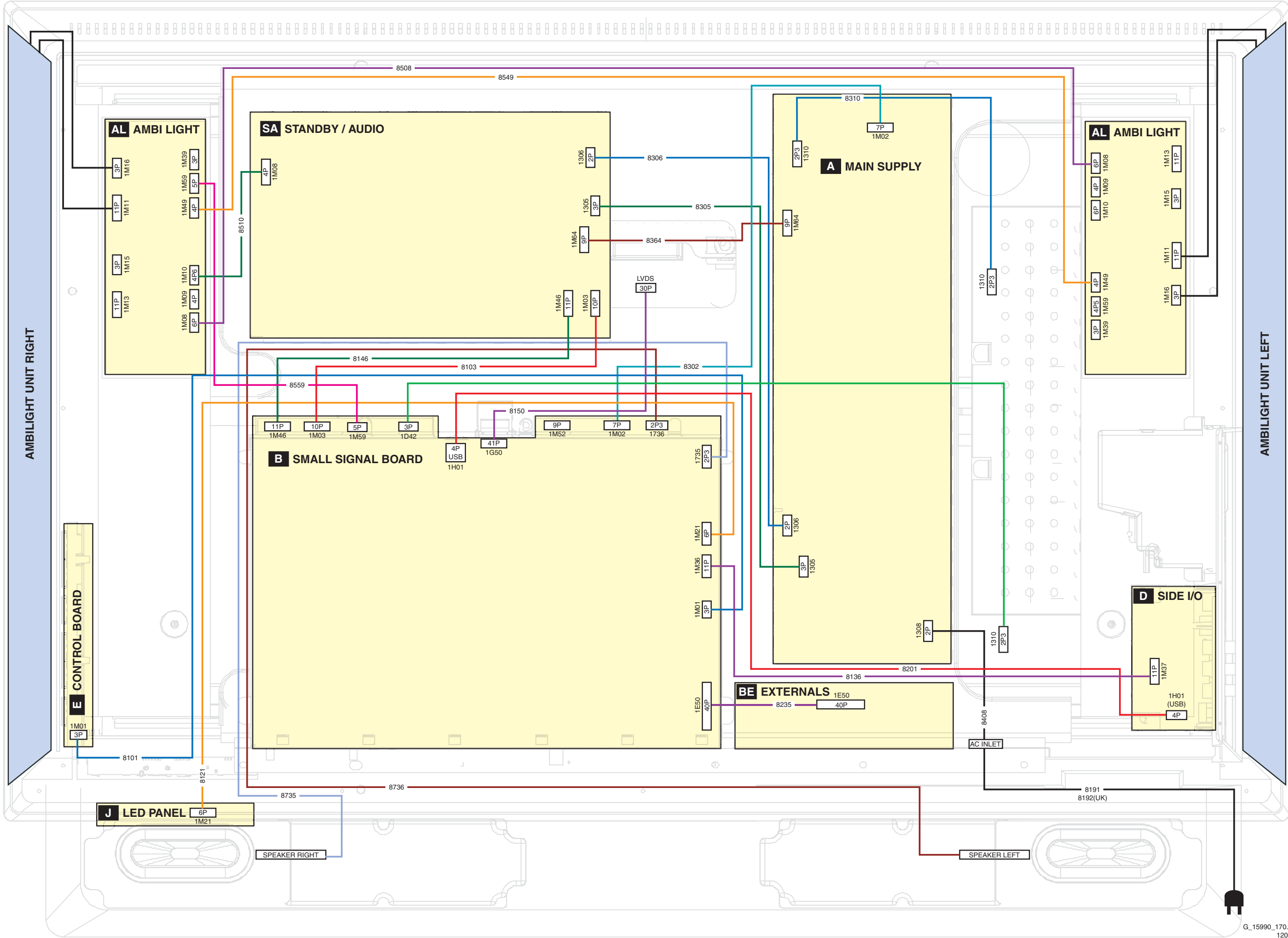
7. If you do not see the above info, restart the above procedure, and check your HyperTerminal settings and the connections between PC and TV.
8. Via "Transfer" -> "Send text file ...", you can send the proper upgrade file to the TV. This file will be distributed via the Service Organization.
9. After successful programming, you must see the following info:
 - DCSUM=0xECB3
 - :Ok
 - MCSUM=0xECB3
 - Programming
 - PCSUM=0xECB3
 - Finished
10. If you do not see this info, restart the complete procedure.
11. Close HyperTerminal.
12. Disconnect and connect Mains/AC Power again.

6. Block Diagrams, Test Point Overviews, and Waveforms

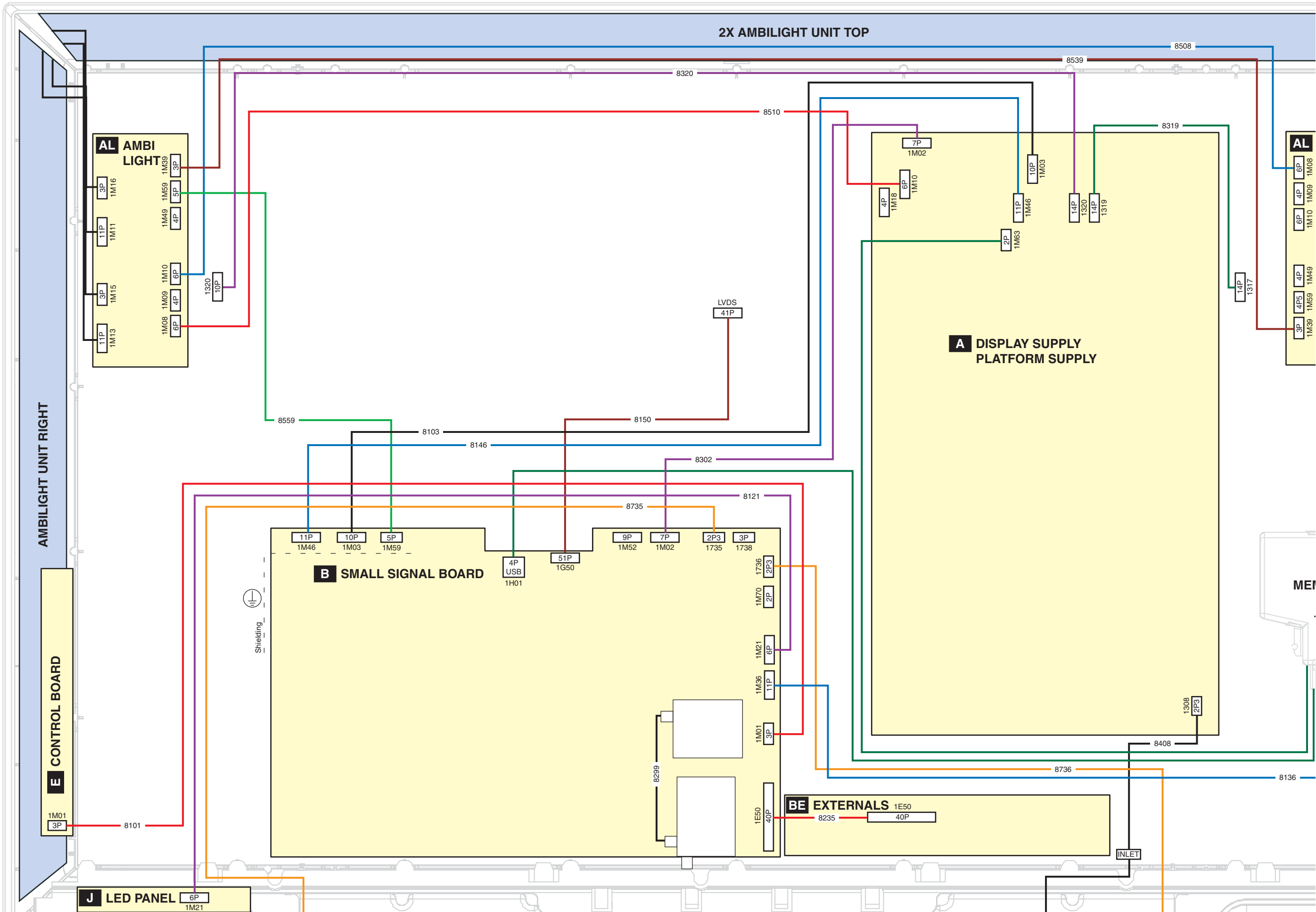
Wiring Diagram 32" STEP (ME6)
WIRING 32" STEP



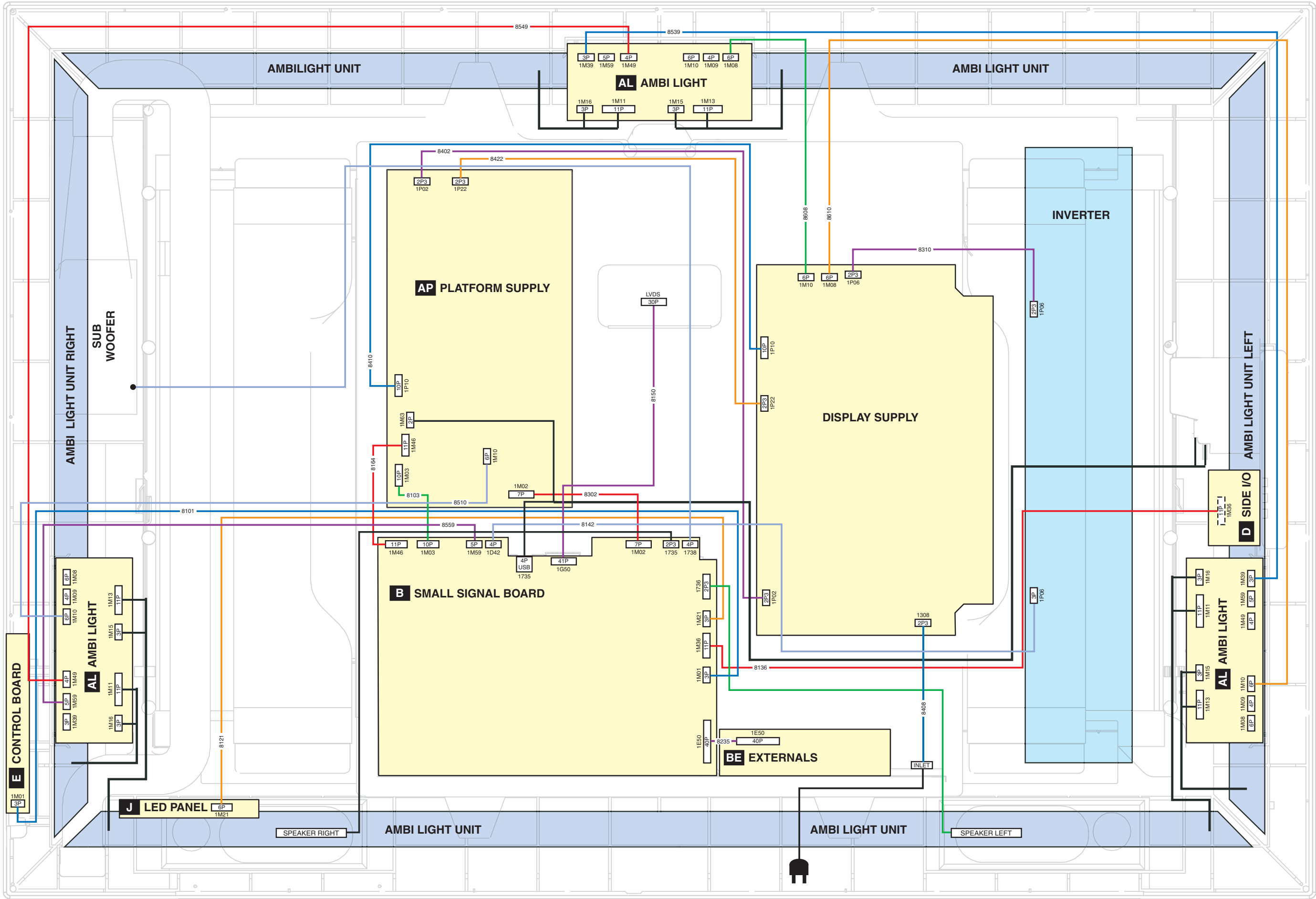
Wiring Diagram 32" TOP B
WIRING 32" TOP B



Wiring Diagram 37" TOP B
WIRING 37" TOP B

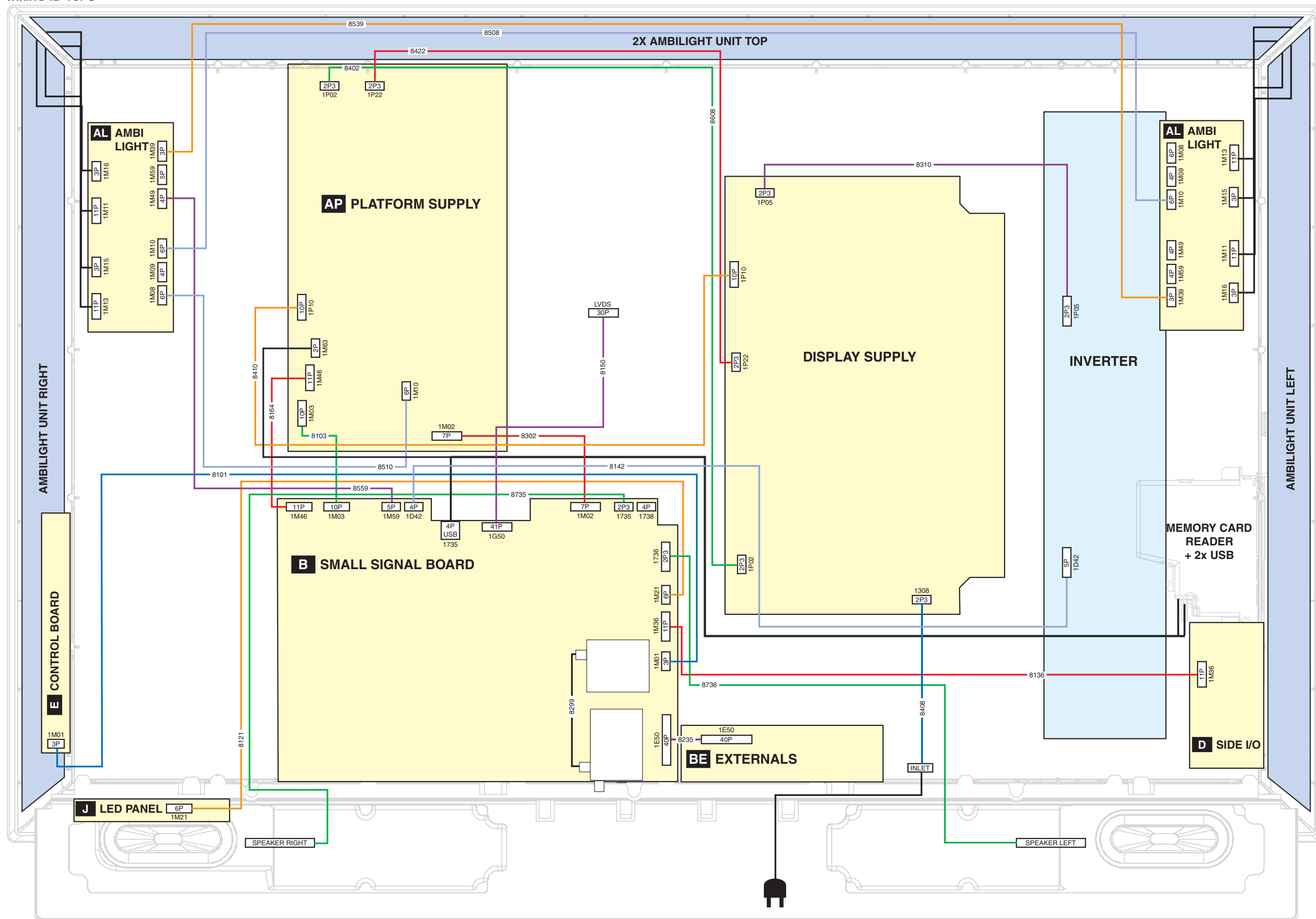


Wiring Diagram 42" TOP A
WIRING 42" TOP A

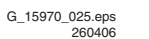


Wiring Diagram 42" TOP B

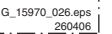
WIRING 42" TOP B



SUPPLY 32" LCD



SUPPLY 37" LCD



DISPLAY SUPPLY (SANKEN)

PRIMARY SIDE

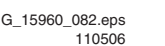
- AC-IN: Vin: 90 - 276 Vac, Freq: 48 - 65 Hz
- 1308: AC-IN connection point
- 1P02: AC-IN FOR PLATFORM-PSU, P: 15W
- 1P22: 400V FOR PLATFORM-PSU, P: 65W
- 1M10: CONTROL connection point
- CONTROL:
 1. DIM CONTROL
 2. POWER GOOD
 3. ON OFF
 4. GND
 5. PWM CONTROL
 6. N.C.
 7. STANDBY
 8. N.C.
 9. +5V2

SECONDARY SIDE

- 1P05: 295v output
- 1P06: 295v (Optional) output
- 1M08: 12V +/- 5% output (I_{typ}: 2.2A, I_{max}: 3A, P_{max}: 36W)
- 1M08: 295 +/- 5% output (I_{typ}: 0.8A, I_{max}: 0.9A, P_{max}: 264W)
- 1M08: AMBIENT LIGHT output

[illegible]

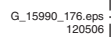
AP1 MAINS FILTER + STANDBY



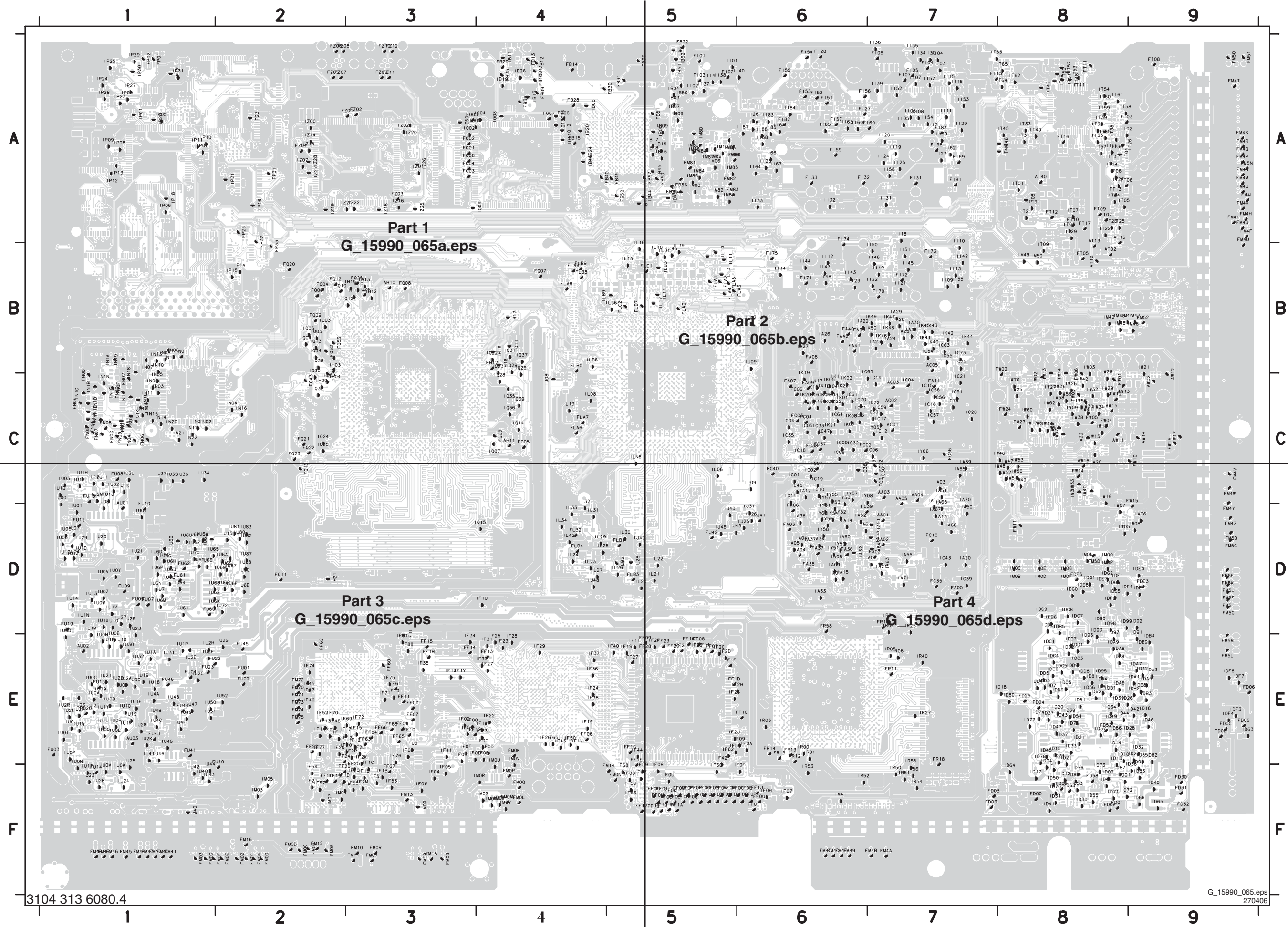
AUDIO



CONTROL & CLOCK SIGNALS



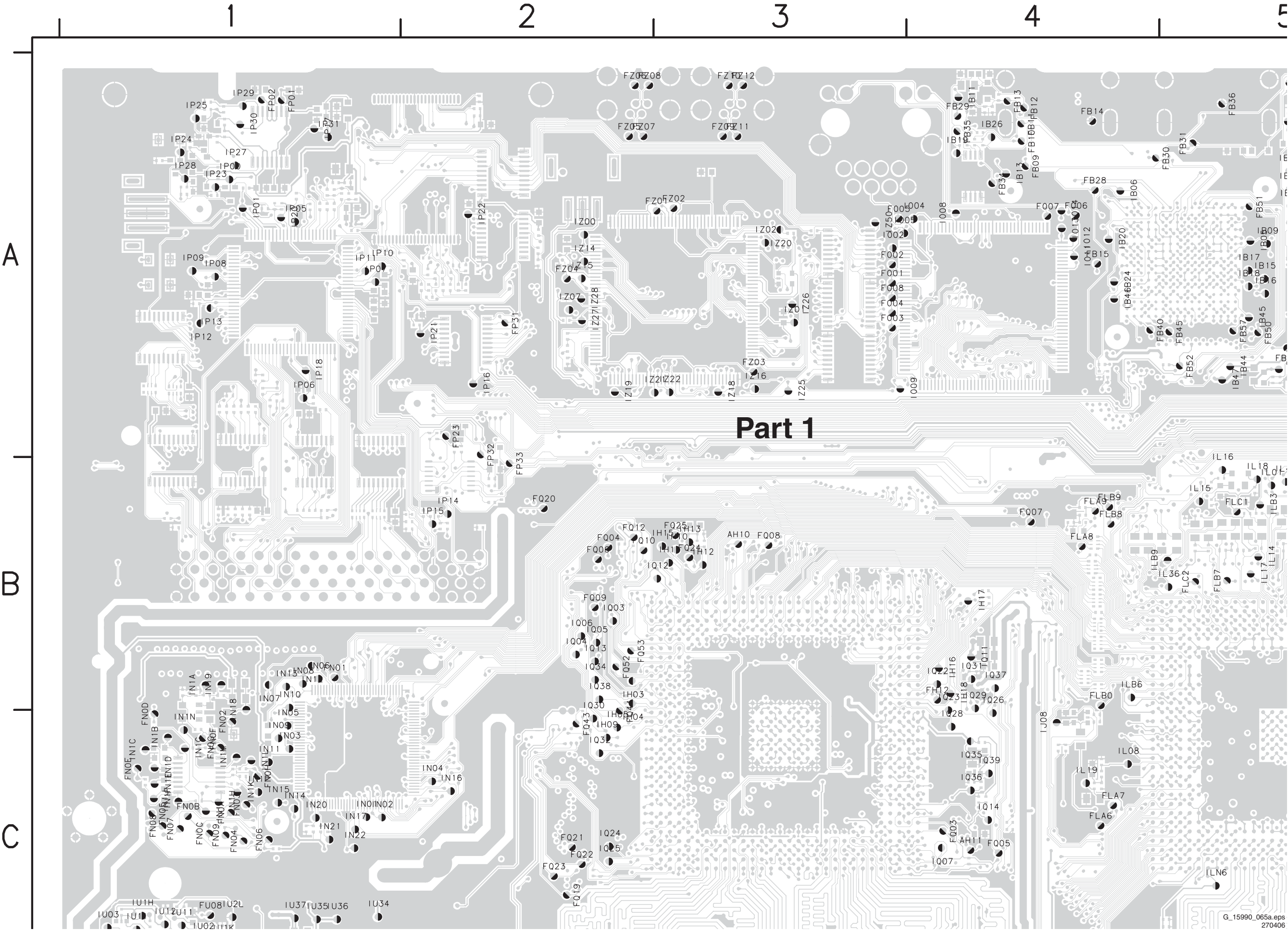
Test Point Overview SSB (Bottom Side)



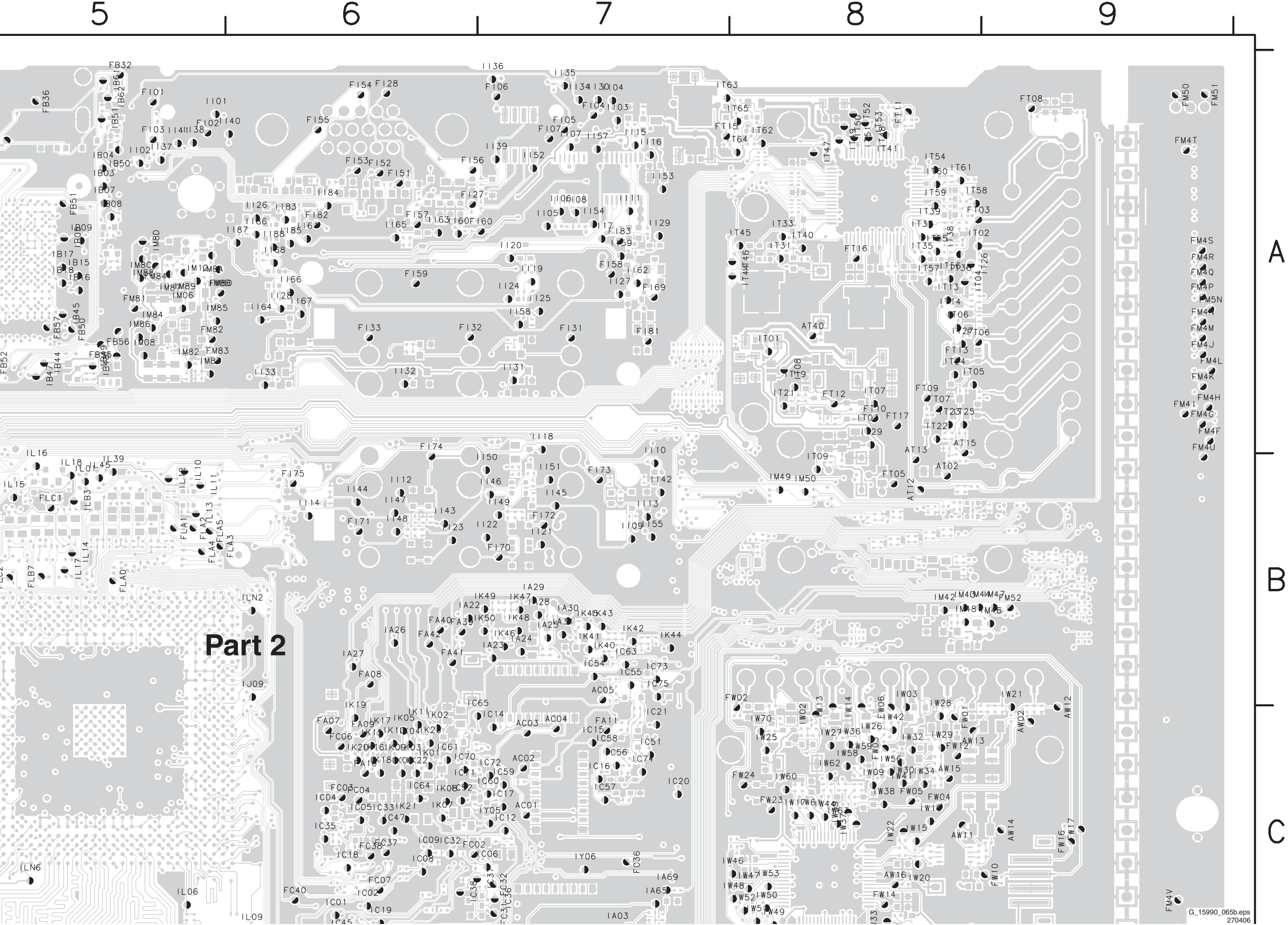
Test Point Overview SSB (Mapping)

A01	E1	F074	A2	F201	E9	F328	E5	FB52	A5	F154	A6	FM83	A5	F212	A3	I132	D1	I259	E1	I386	A1	I513	C6	I640	E2	I767	E8	I907	C7	IA60	D6	ID48	F8	IF1D	F2	I140	A6	IM0P	D8	IQ36	C4	IU1Q	E1	IW37	C8
A02	E1	F075	A3	F202	E9	F329	E5	FB55	A5	F155	A6	FM84	A5	I001	C5	I133	D2	I260	E1	I387	A1	I514	C6	I641	F3	I768	E8	I908	C7	IA61	D6	ID49	E8	IF1L	F2	I141	A5	IM0Q	D8	IQ37	B4	IU1R	E1	IW38	C8
A03	D1	F076	A3	F203	D9	F330	E3	FB56	A5	F156	A6	FM84	B1	I002	B6	I134	D2	I261	E1	I388	A2	I515	C6	I642	E4	I769	E9	I909	C6	IA63	D7	ID50	F8	IF1S	E5	I142	B7	IM0R	F4	IQ38	B2	IU1S	E1	IW39	C8
A04	C7	F077	A3	F204	D9	F331	E4	FB57	A5	F157	A6	FM82	C1	I003	B5	I135	D1	I262	F1	I389	A2	I516	C6	I643	E2	I770	E8	I910	C6	IA64	D7	ID51	E8	IF1T	E5	I143	B6	IM0S	F4	IQ39	C4	IU1T	F1	IW40	C8
A05	C7	F078	C8	F205	D9	F332	E3	FC02	C6	F158	A7	FM83	C1	I004	B4	I136	D1	I263	E1	I390	A1	I517	C6	I644	E2	I771	E9	I911	C6	IA65	C7	ID53	F8	IF1U	D4	I144	B6	IM0T	F4	IQ39	E6	IU1U	F1	IW41	C8
A06	C7	F078	C8	F206	D9	F333	E3	FC03	C6	F159	A6	FM84	C1	I005	B5	I137	D1	I264	E1	I391	A1	I518	C6	I645	E2	I772	E8	I912	C6	IA66	D7	ID54	E8	IF1V	E4	I145	B7	IM0U	E4	IR01	E6	IU1V	F1	IW42	C8
A07	C7	F080	C9	F207	D5	F334	C6	FC04	C6	F160	A7	FM85	C1	I006	B4	I138	D1	I265	E1	I392	A1	I519	C6	I646	E2	I773	E9	I913	C6	IA67	D7	ID55	F8	IF1W	E3	I146	B7	IM0V	F4	IR02	E6	IU1W	E1	IW43	C8
A08	C7	F081	C9	F208	D9	F335	E3	FC06	C6	F169	A7	FM86	C1	I007	D4	I139	D1	I266	D1	I393	A2	I520	C6	I647	E5	I774	E9	I914	A5	IA68	C7	ID56	E8	IF1Y	E3	I147	B6	IM0W	F4	IR04	D7	IU1Y	E1	IW46	C8
A09	D7	F082	D9	F209	D8	F336	E3	FC07	C6	F170	B7	FM87	C1	I008	D4	I140	D1	I267	D1	I394	B2	I521	C6	I648	E4	I775	E9	I915	A5	IA69	C7	ID57	E8	IF20	E3	I148	B6	IM0Y	F4	IR05	E7	IU1Z	D1	IW47	C8
A10	C8	F083	C8	F210	D9	F337	D8	FC10	D7	F171	B6	FM88	C1	I009	D4	I141	D1	I268	F1	I395	B2	I522	C6	I649	F5	I776	D8	I916	A5	IA70	C7	ID61	E8	IF21	E5	I149	B7	IM12	A5	IR06	E7	IU20	D1	IW48	C8
A11	C8	F084	C8	F211	D9	F338	D9	FC31	C7	F172	B7	FM89	C1	I010	D4	I142	D7	I269	F1	I396	A1	I523	C6	I650	E3	I777	D8	I917	A5	IA71	D7	ID62	E8	IF21	F2	I150	B7	IM40	F1	IR24	D7	IU21	E1	IW49	C8
A12	C9	F085	D8	F212	B9	F339	F8	FC32	C7	F173	B7	FM89	C1	I011	D5	I143	A3	I270	F1	I397	A1	I524	C6	I651	E5	I778	E8	I918	A5	IB03	A5	ID63	E9	IF22	E4	I151	B7	IM41	F6	IR25	D7	IU22	E1	IW50	C8
A13	C8	F086	C9	F213	A9	F340	F8	FC35	D7	F174	A6	FM89	C1	I012	D4	I144	E1	I271	E1	I398	A1	I525	C6	I652	E4	I779	E8	I919	A5	IB04	A5	ID64	F8	IF23	E4	I152	A7	IM42	B8	IR27	E7	IU23	F1	IW51	C8
A14	C9	F087	C8	F214	A9	F341	E8	FC36	C7	F175	B6	FM89	C1	I013	D5	I145	E1	I272	E1	I399	A1	I526	C6	I653	E4	I780	E8	I920	A5	IB05	A5	ID65	F9	IF24	E4	I153	A7	IM43	B8	IR40	E7	IU24	F1	IW52	C8
A15	C8	F088	C8	F215	D9	F342	F9	FC37	C6	F181	A7	FM89	C1	I014	D4	I146	E1	I273	D1	I400	A1	I527	C6	I654	E4	I781	E8	I921	A5	IB06	A5	ID66	F9	IF25	E4	I154	A7	IM44	B8	IR50	F7	IU25	E1	IW53	C8
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A17	A8	F090	C8	F217	C9	F344	F9	FC39	D6	F183	A7	FM89	C1	I016	D4	I148	E1	I275	E1	I402	A1	I529	C6	I656	E3	I783	D9	I923	A4	IB08	A5	ID71	F8	IF27	E4	I157	A7	IM47	B9	IR52	F6	IU27	D1	IW58	C8
A18	A8	F091	C8	F218	C9	F345	E8	FC40	C6	F184	D6	FM89	C1	I017	D4	I149	E1	I276	E1	I403	A1	I530	C6	I657	E4	I784	E9	I924	A4	IB09	A5	ID72	F8	IF28	E4	I158	A7	IM48	B8	IR53	F6	IU28	E1	IW59	C8
A19	B8	F092	C8	F219	B9	F346	E8	FD00	F8	F185	D5	FM89	C1	I018	D4	I150	E1	I277	F1	I404	A1	I531	A6	I658	E4	I785	D8	I925	A4	IB11	A4	ID73	F8	IF29	E4	I159	A7	IM49	B8	IR54	F7	IU29	D1	IW60	C8
A20	B8	F093	D1	F220	A9	F347	E9	FD01	F8	FLA0	B5	FM89	C1	I019	D5	I151	E1	I278	E1	I405	A1	I532	A6	I659	E4	I786	F8	I926	A5	IB13	A4	ID74	E8	IF2C	E5	I160	A6	IM50	B8	IR55	E7	IU2A	E1	IW61	C8
A21	B8	F094	D1	F221	A9	F348	E9	FD02	F8	FLA1	B5	FM89	C1	I020	D5	I152	E1	I279	D1	I406	A1	I533	A6	I660	F3	I787	E8	I927	A5	IB15	A5	ID75	E8	IF2D	E5	I161	A6	IM82	A5	IR56	F7	IU2B	F1	IW62	C8
A22	C4	F095	D1	F222	A9	F349	F7	FD03	F7	FLA2	B5	FM89	C1	I021	D5	I153	E1	I280	E1	I407	A4	I534	A6	I661	E3	I788	F9	I928	A5	IB16	A5	ID76	F8	IF2F	E5	I162	A7	IM83	A5	IT01	A8	IU2C	E1	IW63	C8
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AA02	D7	F102	E1	F229	A9	F356	F8	FD24	E8	FLA9	B4	FM89	C1	I028	B5	I160	A2	I287	E1	I414	A4	I541	A6	I668	E5	I795	E8	I935	A4	IB44	A5	ID86	E8	IF2N	E2	I183	A6	IM8A	A5	IT08	A8	IU2K	E1	IY51	D6
AA03	C7	F103	E1	F230	A9	F357	C6	FD25	E8	FLB0	B4	FM89	C1	I029	B5	I161	A3	I288	D1	I415	A3	I542	A6	I669	E5	I796	E8	I936	A5	IB45	A5	ID87	F8	IF2P	E3	I184	A6	IM8B	A5	IT09	B8	IU2L	C1	IY52	D6
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AC04	C7	F109	D1	F236	F6	F363	C7	FD63	F8	FLB7	B5	FM89	C1	I035	D5	I167	D6	I294	A8	I421	C1	I548	A7	I675	E4	I802	F9	I942	D7	IB51	A5	ID95	E8	IF35	E3	I190	A6	IN04	C2	IT23	A8	IU2T	E1	IY58	D6
AC05	B4	F110	B2	F237	A9	F364	F7	FD67	F8	FLB8	B4	FM89	C1	I036	D4	I168	D6	I295	A8	I422	C1	I549	B7	I676	E4	I803	F8	I943	D7	IB52	A5	ID96	E8	IF36	E3	I191	A6	IN05	C1	IT24	A8	IU2U	E1	IY59	D6
AH10	B3	F111	D1	F238	F7	F365	D7	FD68	F8	FLB9	B4	FM89	C1	I037	B5	I169	D6	I296	A8	I423	C1	I550	A7</																						

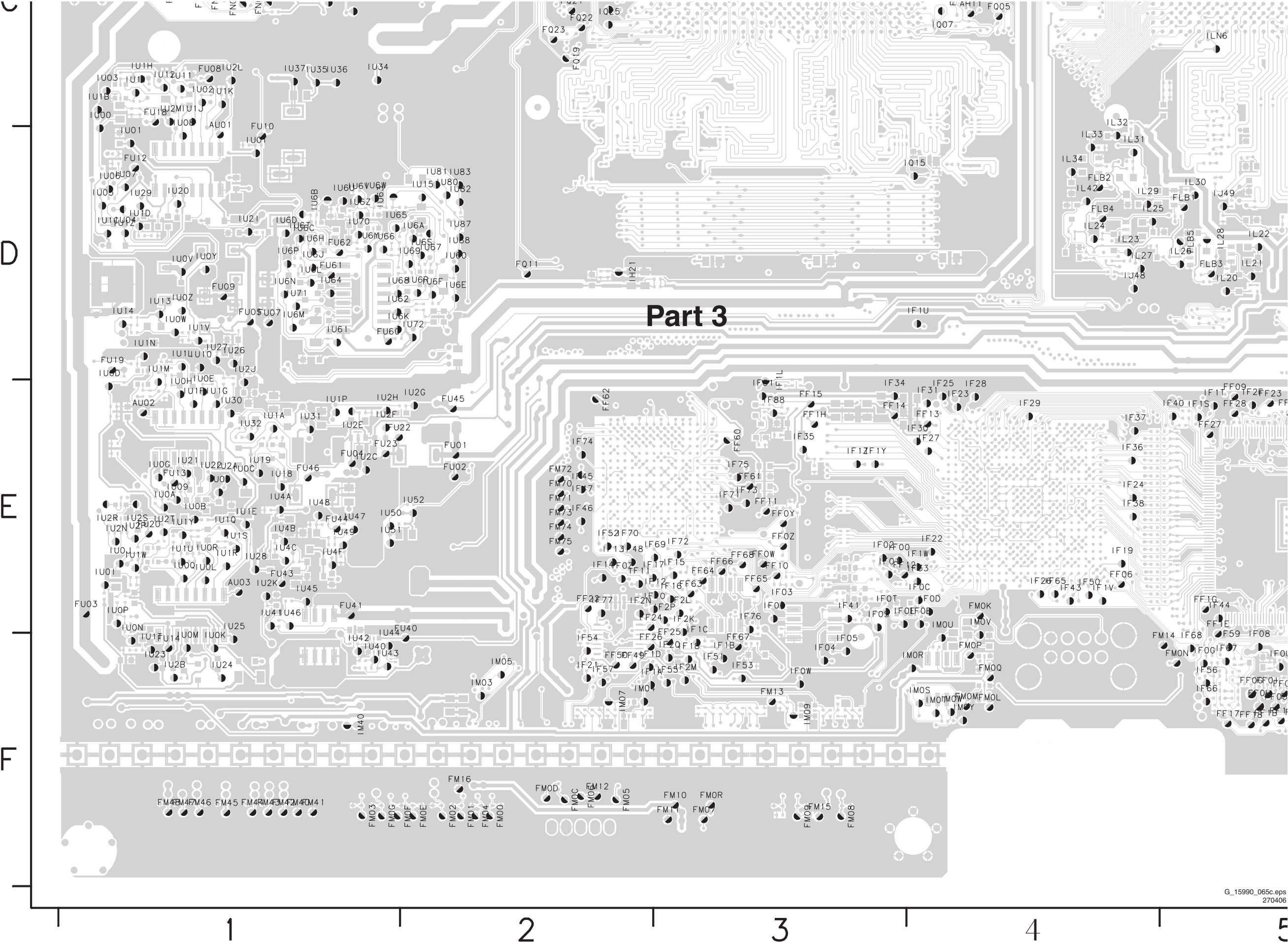
Test Point Overview SSB Part 1 (Bottom Side)



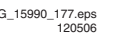
Test Point Overview SSB Part 2 (Bottom Side)



Test Point Overview SSB Part 3 (Bottom Side)

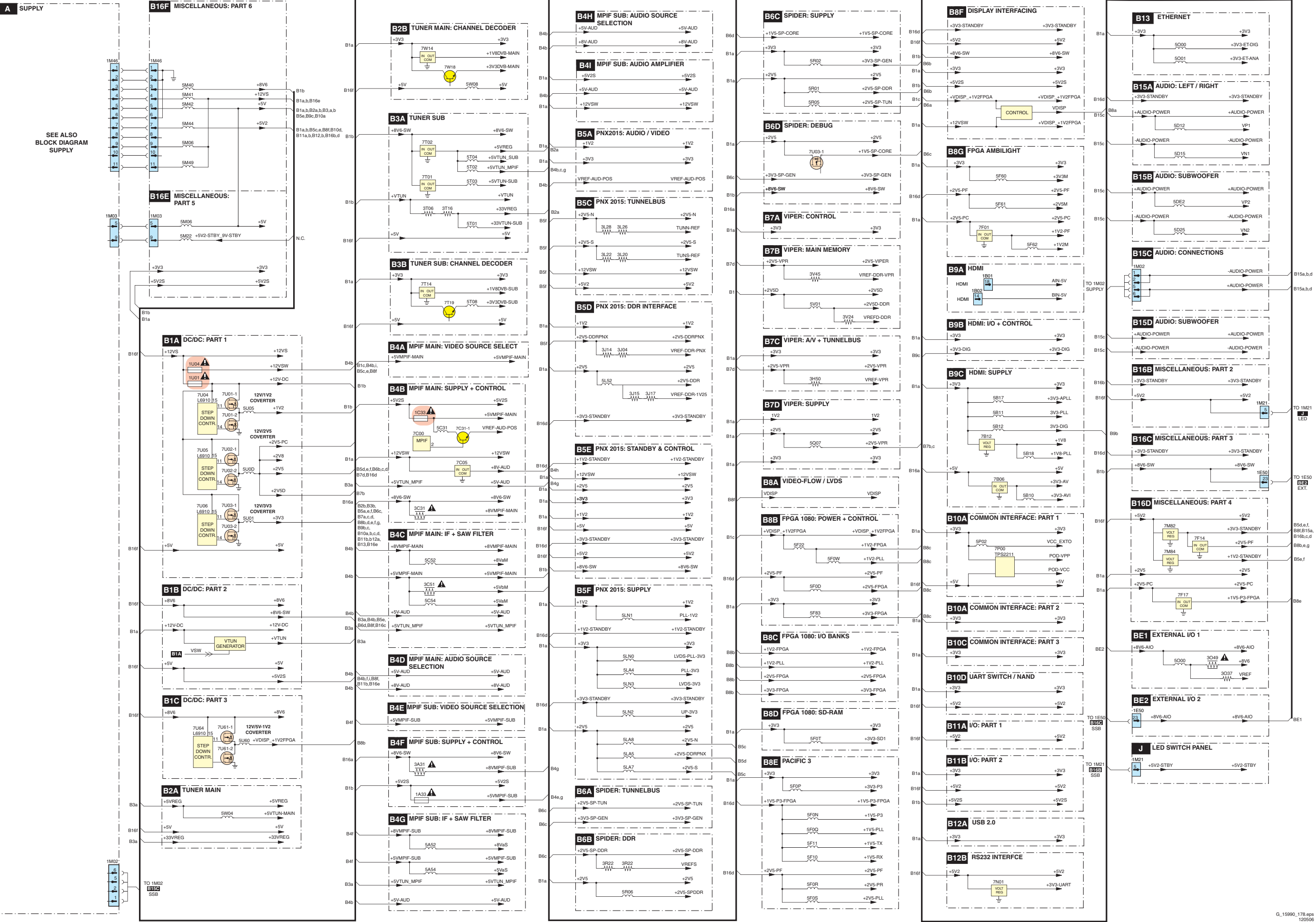


I²C



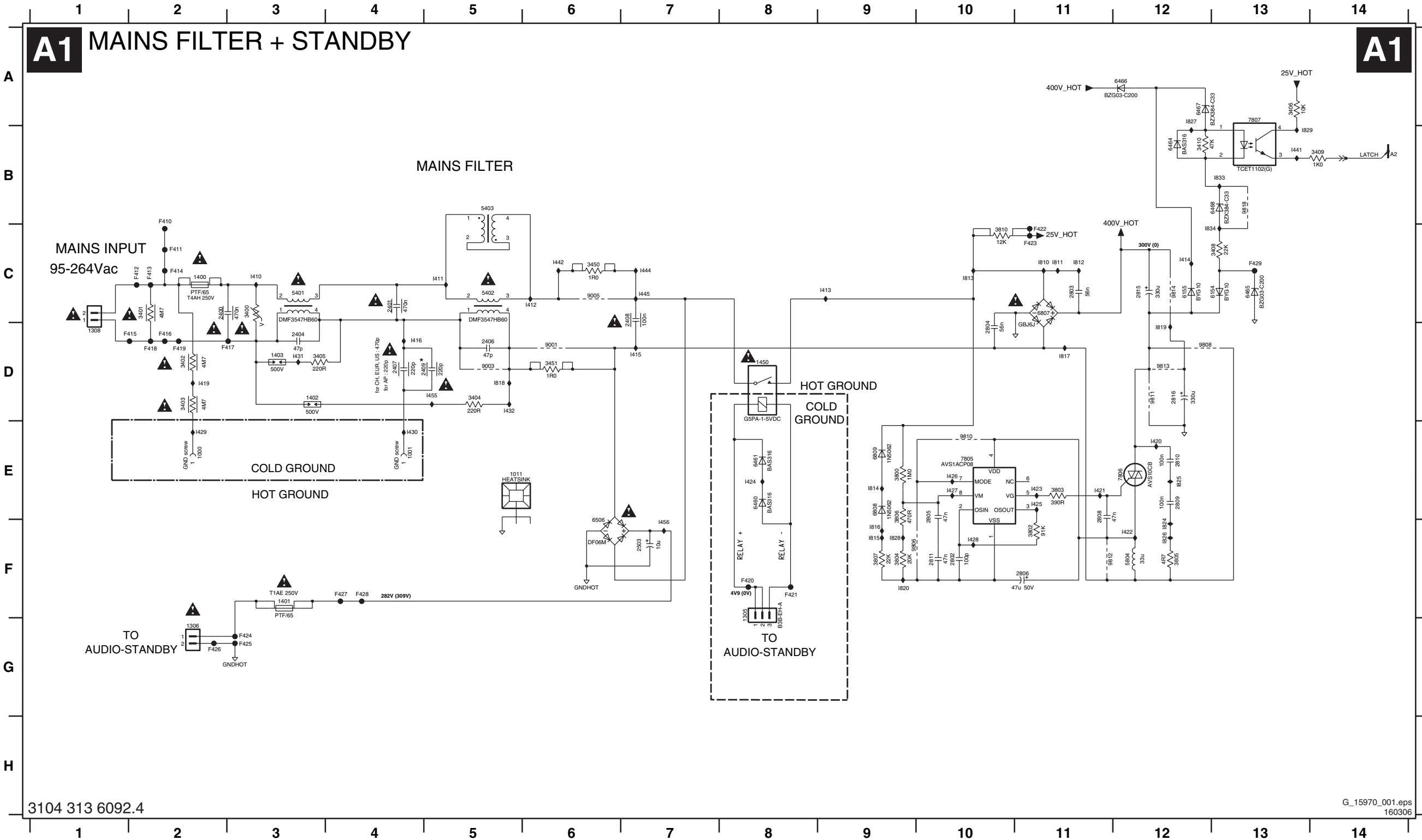
Supply Lines Overview

SUPPLY LINES OVERVIEW



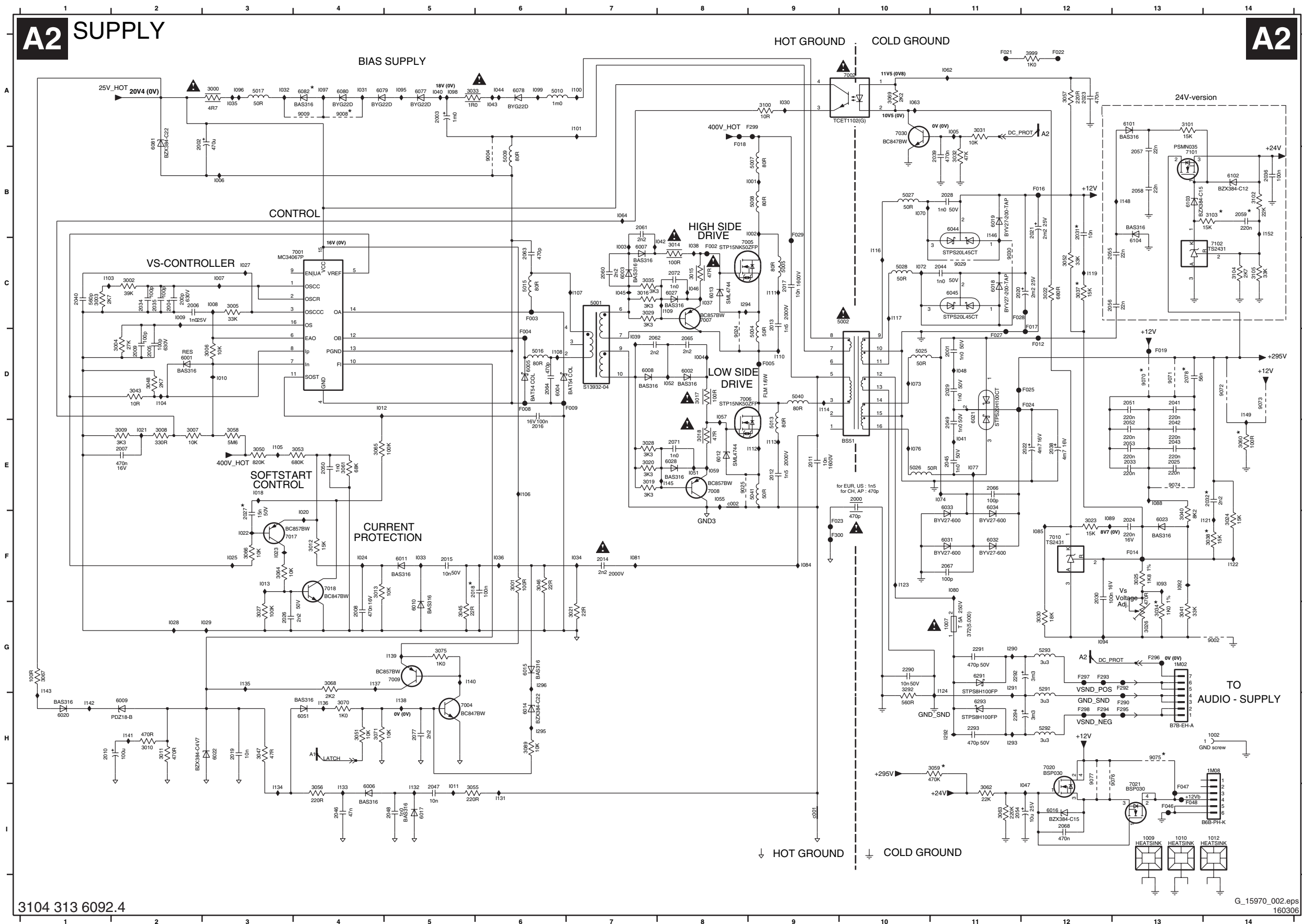
7. Circuit Diagrams and PWB Layouts

Power Supply 32": Filter & Stand-by



1000 E2	F425 G3
1001 E4	F426 G2
1011 E5	F427 F4
1305 F8	F428 F4
1306 G2	F429 C13
1308 D1	I410 C3
1400 C2	I411 C5
1401 F3	I412 C6
1402 D3	I413 C9
1403 D3	I414 C12
1450 D8	I415 D7
2400 C2	I416 D4
2401 C4	I419 D2
2404 D3	I420 E12
2406 D5	I421 E11
2407 D4	I422 F12
2408 C7	I423 E11
2409 D5	I424 E8
2503 F7	I425 E11
2802 F10	I426 E10
2803 C11	I427 E10
2804 D10	I428 F10
2805 E10	I429 E2
2806 F11	I430 E4
2808 E11	I431 D3
2809 E12	I432 D5
2810 E12	I441 B13
2811 F10	I442 C6
2815 C12	I444 C7
2816 D12	I445 C7
3400 C3	I455 D5
3401 C2	I456 F7
3402 D2	I810 C11
3403 D2	I811 C11
3404 D5	I812 C11
3405 D3	I813 C10
3406 A13	I814 E9
3408 C13	I815 F9
3409 B14	I816 F9
3410 B12	I817 D11
3450 C6	I818 D5
3451 D6	I819 D12
3800 E9	I820 F9
3802 F11	I824 F12
3803 E11	I825 E12
3804 F9	I826 F12
3805 F12	I827 A12
3806 E9	I828 F9
3807 F9	I829 B13
3810 C10	I833 B13
5401 C3	I834 C12
5402 C5	
5403 B5	
5804 F12	
6154 C13	
6155 C12	
6460 E8	
6461 E8	
6464 B12	
6465 C13	
6466 A12	
6467 A12	
6468 B13	
6506 F6	
6807 C11	
6808 E9	
6809 E9	
7805 E10	
7806 E12	
7807 A13	
9001 D6	
9003 D5	
9005 C6	
9806 F9	
9808 D12	
9810 E10	
9811 D12	
9812 F11	
9813 D12	
9814 C12	
9818 B13	
F410 B2	
F411 C2	
F412 C2	
F413 C2	
F414 C2	
F415 D2	
F416 D2	
F417 D3	
F418 D2	
F419 D2	
F420 F8	
F421 F8	
F422 C11	
F423 C11	
F424 G3	

Power Supply 32": Supply



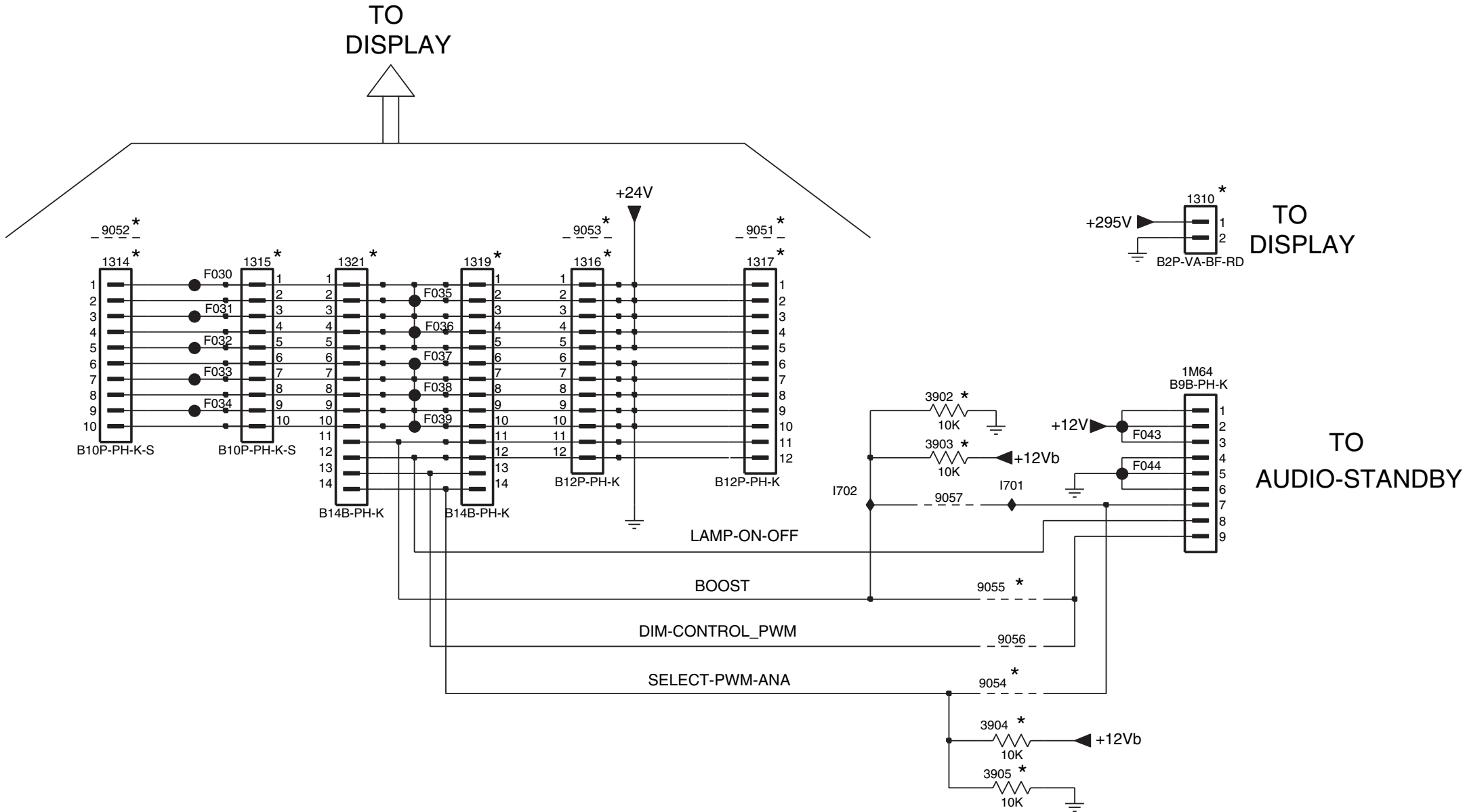
1002 H14	3032 B11	7009 G5	1084 F9
1007 G11	3033 A5	7010 F12	1085 F12
1009 I13	3034 G13	7017 F3	1088 E13
1010 I14	3035 C7	7018 F4	1089 F12
1012 I14	3037 C12	7020 H12	1092 F13
1M02 G13	3038 F14	7021 H13	1093 F13
1M08 H14	3040 F13	7030 A10	1094 G12
2000 E10	3041 G13	7101 B13	1095 A5
2001 D11	3043 D2	7102 C14	1096 A3
2002 A2	3045 G5	9002 G14	1097 A4
2003 A5	3046 F6	9004 B6	1098 A5
2004 C2	3047 H3	9008 A4	1099 A6
2005 D2	3048 D2	9009 A4	1100 A7
2006 C2	3050 E3	9024 D8	1101 A7
2007 E2	3051 H4	9025 E8	1103 C1
2008 G4	3052 C12	9029 C11	1104 D2
2009 D2	3053 E4	9030 C11	1105 E3
2010 H1	3055 I5	9070 D13	1106 E6
2011 E9	3056 I4	9071 D13	1107 C7
2012 E9	3057 A12	9072 D14	1108 D6
2013 C9	3058 E3	9073 D14	1109 C8
2014 F7	3059 H11	9074 E13	1110 D9
2015 F5	3060 E14	9075 H13	1111 C9
2016 E6	3061 E4	9076 H12	1112 E9
2017 C9	3062 I11	9077 H12	1113 E9
2018 F5	3063 I11	9002 C8	1114 D9
2019 H3	3064 F3	9003 C6	1116 C10
2020 C11	3065 E4	9004 D6	1117 C10
2021 B12	3066 F3	9005 D9	1119 C12
2022 E12	3067 G1	9008 D6	1121 F14
2023 A12	3068 G4	9009 D7	1122 F14
2024 F13	3069 A10	9012 D12	1123 F10
2025 E13	3070 H4	9014 F13	1124 G11
2026 G3	3071 H4	9016 B12	1131 I6
2027 F3	3075 G5	9017 C12	1132 I5
2028 B11	3089 H6	9018 A8	1133 I4
2029 D11	3100 A9	9019 D13	1134 I3
2030 F12	3101 A13	9021 A11	1135 G3
2031 B12	3102 B14	9022 A12	1136 H4
2032 E14	3103 B14	9023 F9	1137 G4
2033 E13	3104 C14	9024 D12	1138 H5
2034 C2	3105 C14	9025 D12	1139 G5
2035 C2	3292 G10	9027 D11	1140 G5
2036 B14	3999 A12	9028 C11	1141 H2
2038 E12	5001 C7	9029 B9	1142 H1
2039 B11	5002 C9	9048 I13	1143 G1
2040 C1	5004 D9	9047 I13	1145 E8
2041 D13	5005 C9	9048 I13	1146 B11
2042 E13	5007 B9	9049 H13	1148 B13
2043 E13	5008 B9	9049 H13	1149 D14
2044 C11	5009 B6	9049 H13	1152 B14
2045 E11	5010 A6	9049 H13	1152 B14
2046 I4	5013 E9	9049 H13	1152 B14
2047 I5	5015 C6	9049 H13	1152 B14
2048 I5	5016 D6	9049 H13	1152 B14
2049 E11	5017 A3	9049 H13	1152 B14
2050 E4	5025 D10	9049 H13	1152 B14
2051 D13	5026 E10	9049 H13	1152 B14
2052 I3	5027 B10	9049 H13	1152 B14
2053 E13	5028 C10	9049 H13	1152 B14
2054 I11	5040 D9	9049 H13	1152 B14
2055 C12	5041 E9	9049 H13	1152 B14
2056 C12	5291 G12	9049 H13	1152 B14
2057 B13	5292 H12	9049 H13	1152 B14
2058 B13	5293 G12	9049 H13	1152 B14
2059 B14	6001 D2	9049 H13	1152 B14
2060 C7	6002 D8	9049 H13	1152 B14
2061 B7	6003 C7	9049 H13	1152 B14
2062 D7	6004 D6	9049 H13	1152 B14
2063 C8	6005 D6	9049 H13	1152 B14
2064 D6	6006 I4	9049 H13	1152 B14
2065 D8	6007 C7	9049 H13	1152 B14
2066 E11	6008 D7	9049 H13	1152 B14
2067 F11	6009 H2	9049 H13	1152 B14
2068 I12	6010 G5	9049 H13	1152 B14
2071 E8	6011 F5	9049 H13	1152 B14
2072 C8	6012 E8	9049 H13	1152 B14
2077 H5	6013 C8	9049 H13	1152 B14
2078 D13	6014 H6	9049 H13	1152 B14
2290 G10	6015 G6	9049 H13	1152 B14
2291 G11	6016 I12	9049 H13	1152 B14
2292 G11	6017 I5	9049 H13	1152 B14
2293 H11	6018 C11	9049 H13	1152 B14
2294 H11	6019 B11	9049 H13	1152 B14
3000 A3	6020 H1	9049 H13	1152 B14
3001 F6	6021 D11	9049 H13	1152 B14
3002 C2	6022 H3	9049 H13	1152 B14
3003 C1	6023 F13	9049 H13	1152 B14
3004 D2	6027 C8	9049 H13	1152 B14
3005 C3	6028 E8	9049 H13	1152 B14
3006 D3	6031 F11	9049 H13	1152 B14
3007 E2	6032 F11	9049 H13	1152 B14
3008 E2	6033 E11	9049 H13	1152 B14
3009 E2	6034 E11	9049 H13	1152 B14
3010 H2	6044 B11	9049 H13	1152 B14
3011 H2	6045 C11	9049 H13	1152 B14
3012 F4	6051 H4	9049 H13	1152 B14
3013 F4	6077 A5	9049 H13	1152 B14
3014 C8	6078 A6	9049 H13	1152 B14
3015 C8	6079 A4	9049 H13	1152 B14
3016 C7	6080 A4	9049 H13	1152 B14
3017 D8	6081 A2	9049 H13	1152 B14
3018 E8	6082 A4	9049 H13	1152 B14
3019 E7	6101 A13	9049 H13	1152 B14
3020 E7	6102 B14	9049 H13	1152 B14
3021 G7	6103 B13	9049 H13	1152 B14
3022 C12	6104 C13	9049 H13	1152 B14
3023 F12	6291 G11	9049 H13	1152 B14
3024 F14	6293 H11	9049 H13	1152 B14
3025 F13	7001 C4	9049 H13	1152 B14
3026 G13	7002 A10	9049 H13	1152 B14
3027 G3	7004 H5	9049 H13	1152 B14
3028 E7	7005 C8	9049 H13	1152 B14
3029 C7	7006 D8	9049 H13	1152 B14
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3031 A11	7008 E8	9049 H13	1152 B14

Power Supply 32": Connections

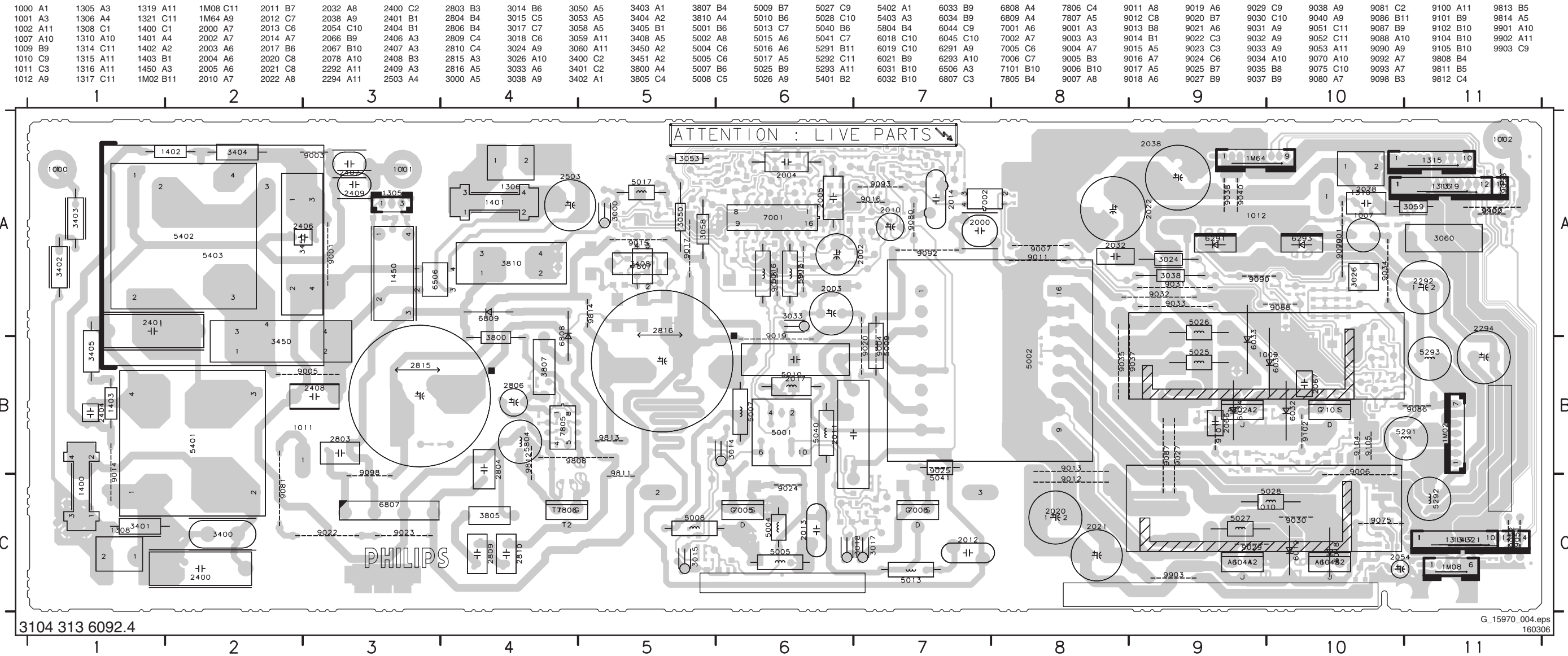
A3 CONNECTIONS

A3

- 1310 B6
- 1314 B1
- 1315 B2
- 1316 B3
- 1317 B4
- 1319 B3
- 1321 B2
- 1M64 C6
- 3902 C5
- 3903 C5
- 3904 E5
- 3905 E5
- 9051 B4
- 9052 B1
- 9053 B3
- 9054 D5
- 9055 D5
- 9056 D5
- 9057 D5
- F030 C2
- F031 C2
- F032 C2
- F033 C2
- F034 C2
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- F039 C3
- F043 C6
- F044 C6
- I701 C5
- I702 C4

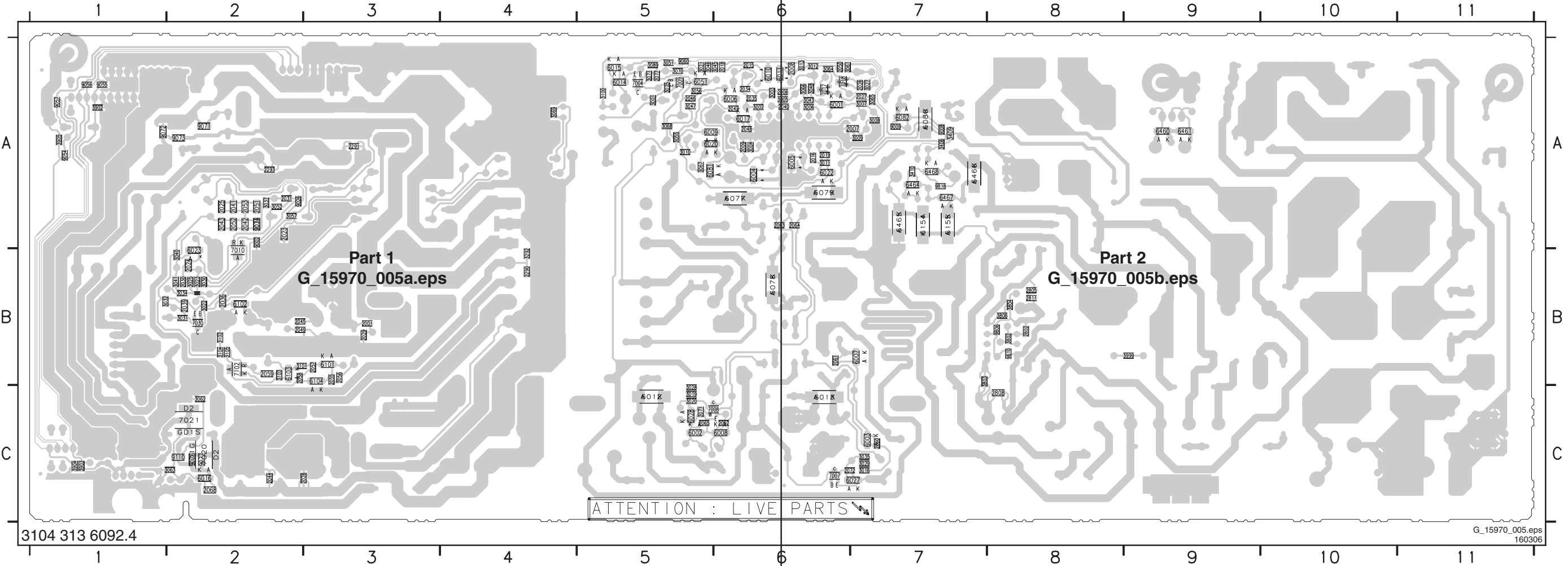


Layout Power Supply 32" (Top Side)



Layout Power Supply 32" (Overview Bottom Side)

2001 B3	2018 A6	2028 C3	2036 B2	2045 B2	2052 A2	2060 C7	2071 C5	2805 B8	3005 A6	3012 A6	3023 B2	3032 B1	3045 A6	3056 A5	3066 A6	3089 A5	3292 B4	3806 B8	6002 C5	6009 A5	6016 C2	6051 A5	6101 B3	6461 A9	7007 C6	7021 C2	9054 A1	9073 A2	9810 B8
2006 A6	2019 A6	2029 B3	2039 B2	2046 A5	2053 A2	2061 B6	2072 C6	2808 C8	3006 A6	3013 A6	3025 B2	3034 B2	3046 A5	3057 A2	3067 A5	3100 A5	3406 A7	3902 A1	6003 C7	6010 A6	6017 A6	6077 A5	6102 B2	6464 A7	7008 C5	7030 B2	9055 A1	9074 A2	9818 A7
2007 A7	2023 A2	2030 B2	2040 A6	2047 A6	2055 B3	2062 C6	2077 A5	2811 B8	3007 A7	3016 C7	3027 A7	3035 C7	3047 A5	3061 A6	3068 A5	3101 B2	3409 A7	3903 C1	6004 A6	6011 A6	6020 A5	6078 B6	6103 B2	6465 A7	7009 A5	7102 B2	9056 A1	9076 C2	
2008 A6	2024 B2	2031 A2	2041 A2	2048 A6	2056 B3	2063 A6	2290 B4	3001 A5	3008 A7	3019 C5	3028 C5	3037 A2	3048 A6	3062 C2	3069 A4	3102 B2	3410 A7	3904 C1	6005 A6	6012 B5	6022 A6	6079 A6	6104 B3	6466 A7	7010 A2	9002 A2	9057 A1	9077 C2	
2009 A6	2025 A2	2033 A2	2042 A2	2049 B2	2057 B3	2064 A6	2291 A3	3002 A6	3009 A7	3020 C5	3029 C7	3040 B2	3051 A5	3063 C2	3070 A5	3103 B2	3802 B8	3905 A1	6006 A6	6013 B6	6023 A2	6080 A7	6154 A7	6467 A7	7017 A6	9008 A7	9060 A5	9085 B2	
2015 A6	2026 A7	2034 A6	2043 A2	2050 A6	2058 B2	2065 C5	2293 A2	3003 A6	3010 A5	3021 A5	3030 B2	3041 B2	3052 A2	3064 A6	3071 A5	3104 B2	3803 B7	3999 B9	6007 B7	6014 A5	6027 C7	6081 A5	6155 A7	6468 A7	7018 A6	9009 A7	9071 A2	9110 C2	
2016 A6	2027 A7	2035 A6	2044 C2	2051 A2	2059 B2	2068 C2	2802 B8	3004 A6	3011 A6	3022 B2	3031 B2	3043 A6	3055 A5	3065 A7	3075 A5	3105 B2	3804 B8	6001 A6	6008 C6	6015 A5	6028 C5	6082 A7	6460 A9	7004 A5	7020 C2	9026 A2	9072 A1	9806 B8	



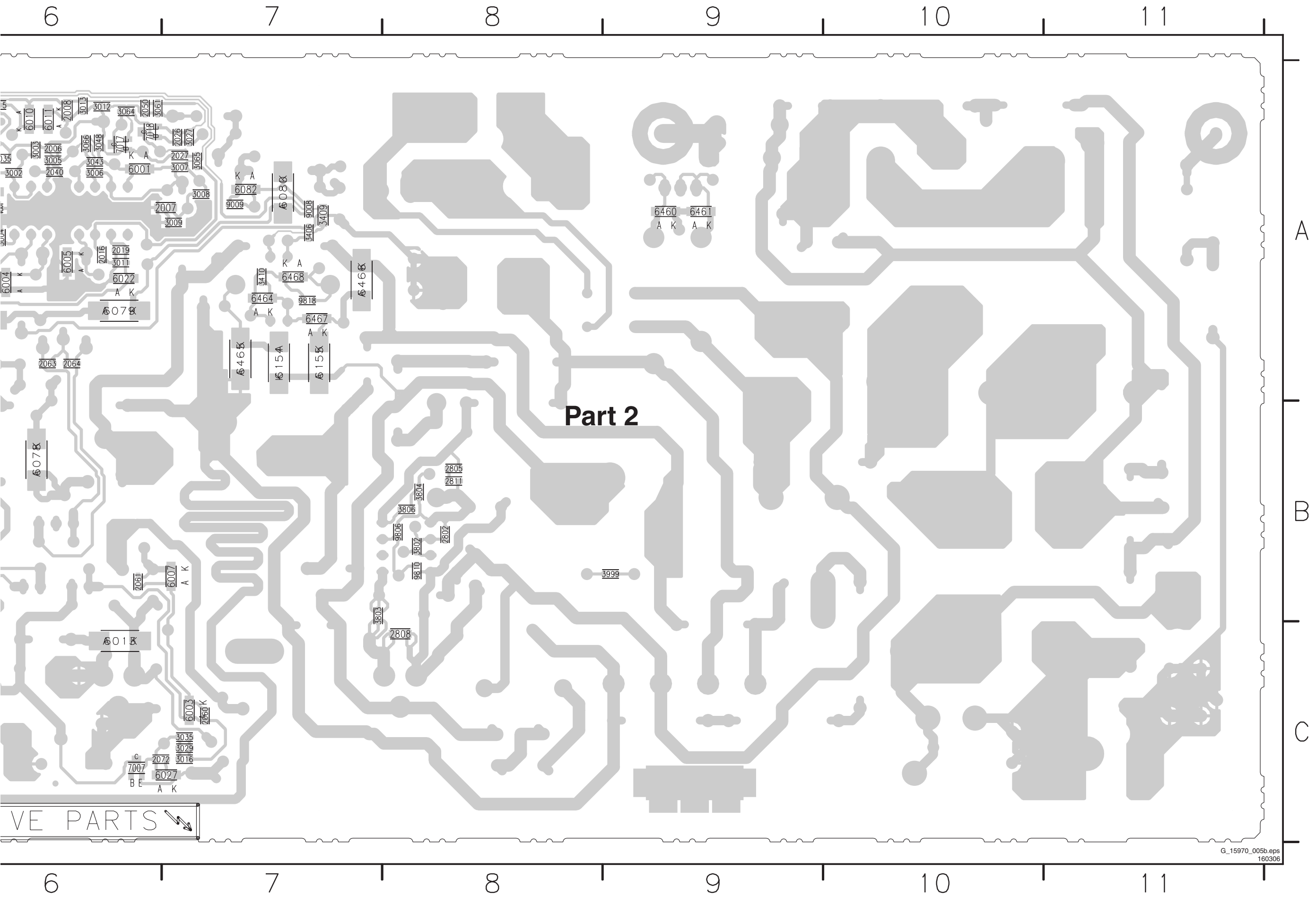
Part 1

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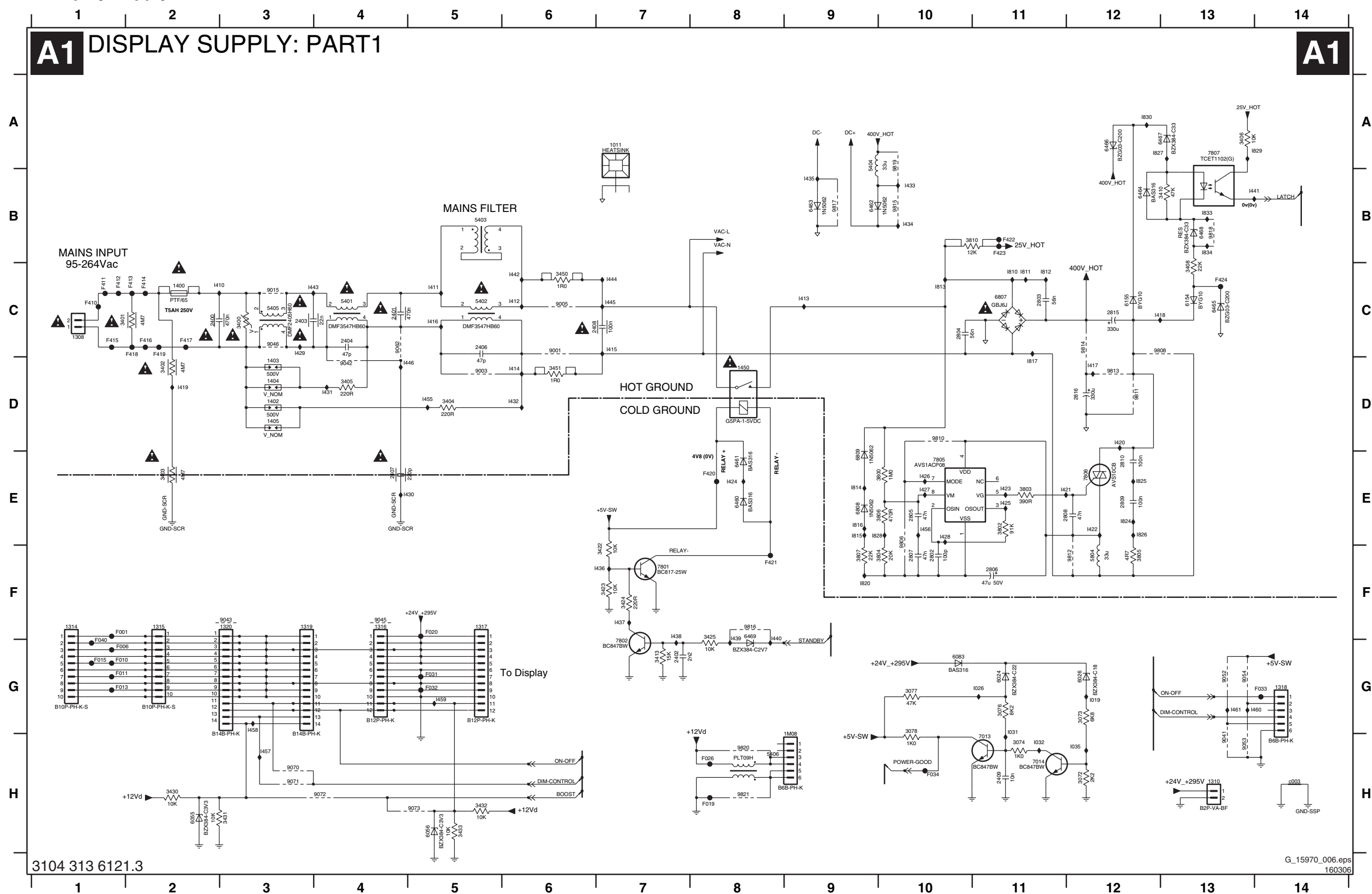
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ATTENTION : LIVE PA

Layout Power Supply 32" (Part 2 Bottom Side)



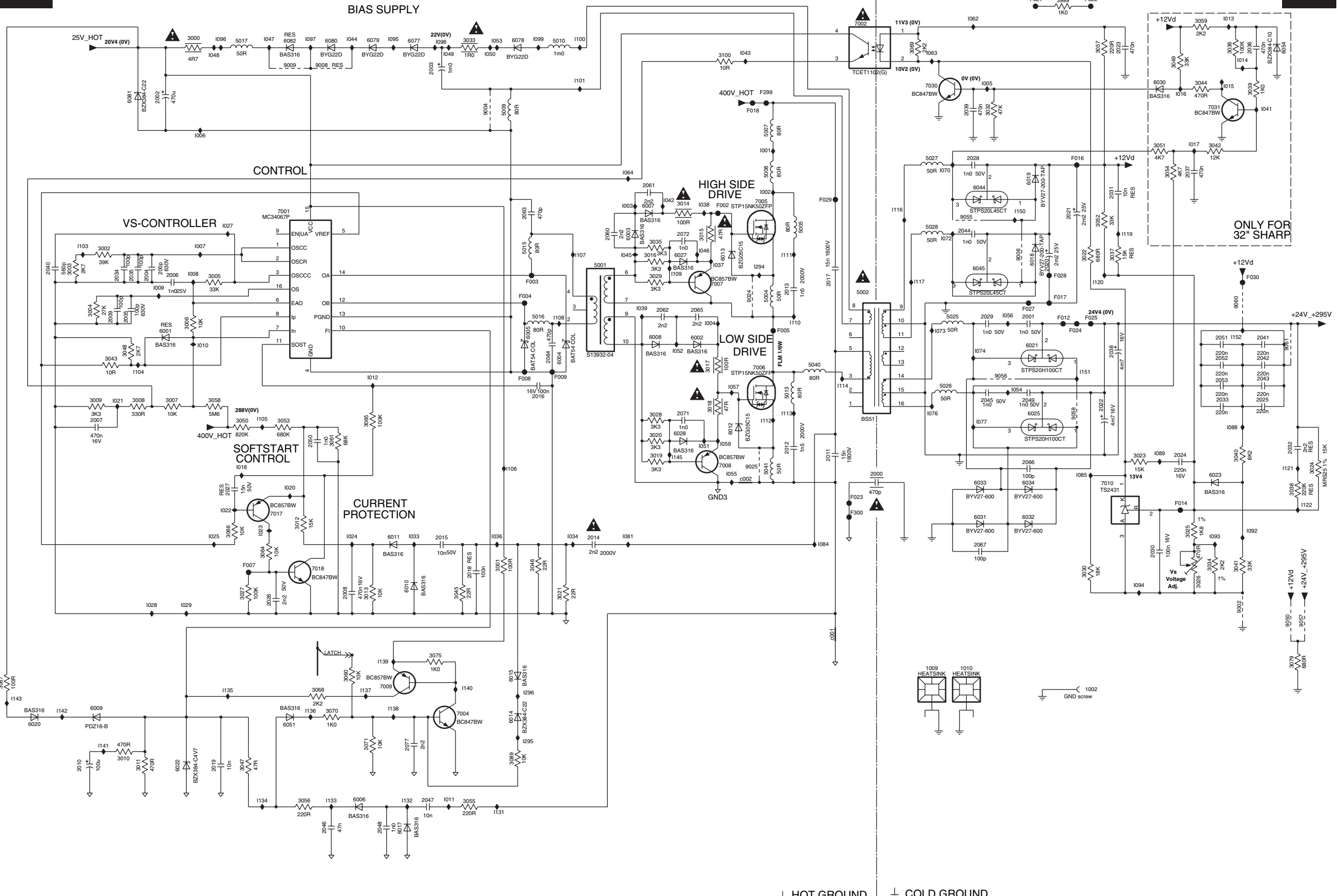
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Display Supply 37": Part 2

A2 DISPLAY SUPPLY: PART2

A2

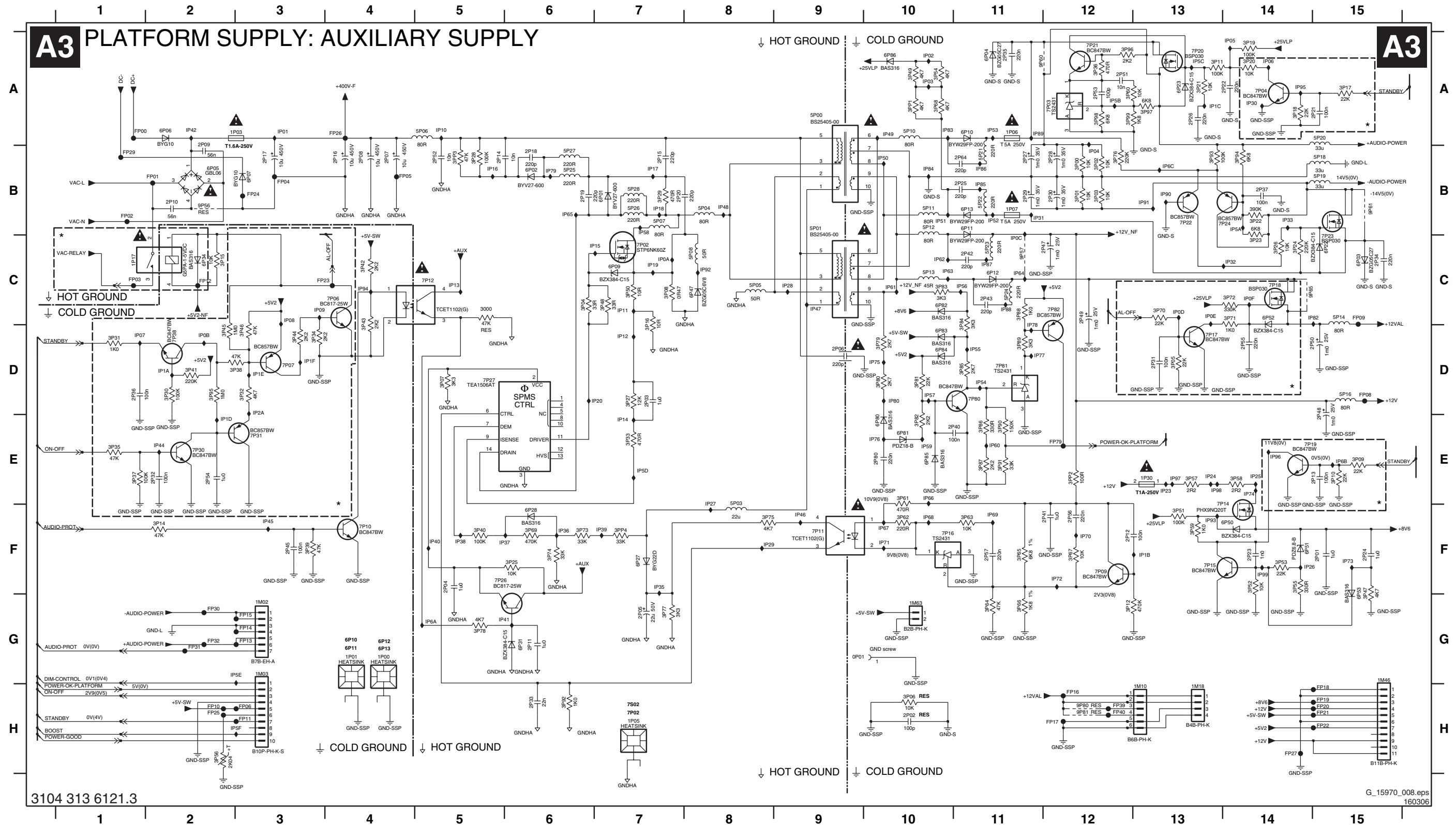


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1009 G10	3052 C11	F017 D11	I143 H1
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2000 E9	3054 B12	F021 A11	I150 C11
2001 D11	3055 I5	F022 A11	I151 D11
2002 A2	3056 I3	F023 F9	I152 D13
2003 A5	3057 A11	F024 D11	I294 C8
2004 C2	3058 E2	F025 D11	I295 H6
2005 D1	3059 A13	F027 D11	I296 H6
2006 C2	3060 G4	F028 C11	C001 G9
2007 E1	3061 E4	F029 C9	C002 E8
2008 G4	3064 F3	F030 C13	
2009 D1	3065 E4	F299 A8	
2010 H1	3066 F2	F300 F9	
2011 E9	3067 H1	I001 B8	
2012 E9	3068 H3	I002 B8	
2013 C8	3069 A10	I003 C7	
2014 F6	3070 H4	I004 D7	
2015 F5	3071 H4	I005 A10	
2016 E6	3075 G5	I006 B2	
2017 C9	3079 G13	I007 C2	
2018 F5	3089 H5	I008 C2	
2019 H2	3100 A8	I009 C2	
2020 C11	3999 A11	I010 D2	
2021 C11	5001 C6	I011 I5	
2022 E12	5002 D9	I012 D4	
2023 A12	5004 D8	I013 A13	
2024 E12	5005 C8	I014 A13	
2025 E13	5007 B8	I015 A13	
2026 G3	5008 B8	I016 A12	
2027 F2	5027 B10	I017 B12	
2028 B10	5010 A6	I018 E3	
2029 D10	5013 E8	I020 F3	
2030 F12	5015 C6	I021 E1	
2031 B12	5016 D6	I022 F2	
2032 E13	5017 A3	I023 F3	
2033 E13	5025 D10	I024 F4	
2034 C1	5026 D10	I025 F2	
2035 C1	5027 B10	I027 C2	
2036 A13	5028 C10	I028 G2	
2037 B12	5040 D9	I029 G2	
2038 D12	5041 E8	I033 F4	
2039 B10	6001 D2	I034 F6	
2040 C1	6002 D7	I036 F5	
2041 D13	6003 C7	I037 C8	
2042 D13	6004 D6	I038 C7	
2043 D13	6005 D6	I039 D7	
2044 C10	6006 I4	I041 B13	
2045 E10	6007 C7	I042 C7	
2046 I3	6008 D7	I043 A8	
2047 I5	6009 H1	I044 A4	
2048 I4	6010 G4	I045 C7	
2049 E11	6011 F4	I046 C7	
2050 E3	6012 E8	I047 A3	
2051 D13	6013 C8	I048 A2	
2052 D13	6014 H5	I049 A5	
2053 D13	6015 G5	I050 A5	
2060 C6	6017 I4	I051 E7	
2061 B7	6018 C11	I052 D7	
2062 D7	6019 B11	I053 A5	
2063 C6	6020 H1	I054 D11	
2064 D6	6021 D11	I055 E8	
2065 D7	6022 H2	I056 D11	
2066 E11	6023 E13	I057 D8	
2067 F10	6025 E11	I059 E8	
2071 E7	6027 C7	I062 A10	
2072 C7	6028 E7	I063 A10	
2077 H4	6030 A12	I064 B7	
3000 A2	6031 F10	I070 B10	
3001 F5	6032 F11	I072 C10	
3002 C1	6033 I0	I073 D10	
3003 C1	6034 E11	I074 D10	
3004 D1	6044 B10	I076 I10	
3005 C2	6045 C10	I077 E10	
3006 D2	6051 H3	I081 F7	
3007 E2	6054 A13	I084 F9	
3008 E2	6077 A4	I085 E11	
3009 E1	6078 A5	I088 E13	
3010 H1	6079 A4	I089 E12	
3011 H2	6080 A4	I092 F13	
3012 F3	6081 A1	I093 F13	
3013 G4	6082 A3	I094 C12	
3014 C7	7001 C3	I095 A4	
3015 C7	7002 A9	I096 A2	
3016 C7	7004 H5	I097 A3	
3017 D7	7005 C8	I098 A5	
3018 E7	7006 D8	I099 A6	
3019 E7	7007 C7	I100 A6	
3020 E7	7008 E8	I101 A6	
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3024 E13	7018 F3	I106 E5	
3025 F12	7030 A10	I107 C6	
3026 G13	7031 B13	I108 D6	
3027 G3	9002 G13	I109 C7	
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3029 C7	9006 C11	I111 C8	
3030 F11	9008 A3	I112 E8	
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3033 A5	9024 D8	I114 D9	
3034 F13	9025 E8	I116 C9	
3035 C7	9050 G13	I117 C10	
3036 A13	9055 C10	I119 C12	
3037 C12	9056 D10	I120 C11	
3038 F13	9057 G13	I121 E13	
3039 A13	9058 E11	I122 F13	
3040 E13	9060 D13	I131 I5	
3041 F13	9061 D13	I132 I4	
3042 B13	F002 C8	I133 I4	
3043 D1	F003 C6	I134 I3	
3044 A13	F004 D6	I135 H2	
3045 G5	F005 D8	I136 H3	
3046 F6	F007 F3	I137 H4	
3047 H3	F008 D6	I138 H4	
3048 D1	F009 D6	I139 G4	
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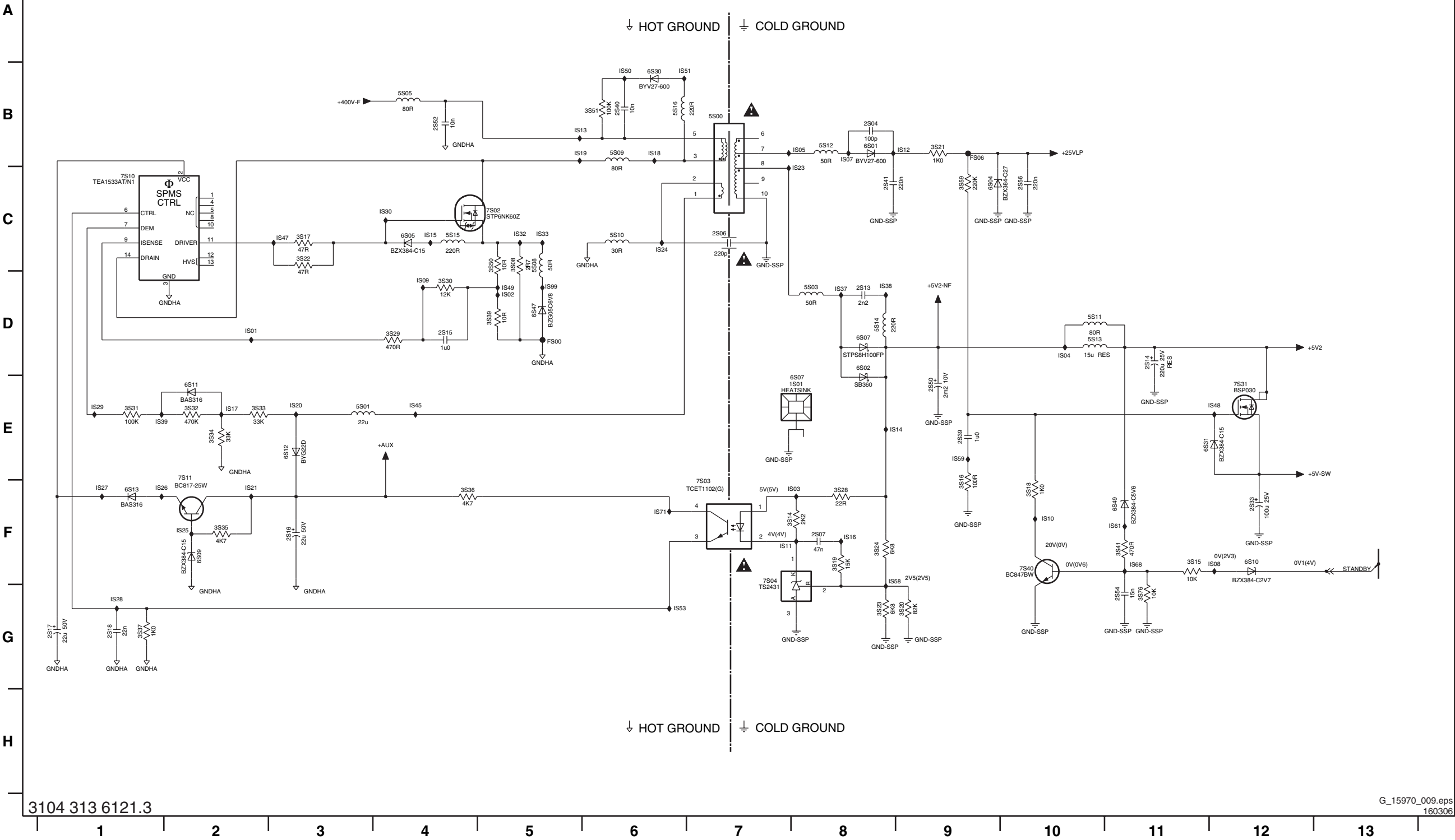
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1P03 A3	2P06 B9	2P18 B6	2P30 B12	2P46 C11	2P60 D2	3P10 E15	3P22 A13	3P34 F6	3P46 D2	3P58 E14	3P68 F6	3P82 D10	3P94 B14	5P02 B9	5P17 D15	5P31 B7	6P23 D13	6P56 F15	7P11 F14	7P24 C15	7P51 A11	FP09 C15	FP21 H15	FP40 H12	IP05 C15	IP17 B5	IP24 E14	IP37 F6	IP48 A10	IP59 A13	IP68 B10	IP77 E10	IP90 B13	
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1P05 H7	2P08 B4	2P20 B7	2P32 E2	2P48 D15	3P00 B12	3P12 G12	3P24 C14	3P36 A12	3P48 C7	3P60 A12	3P72 C14	3P84 C11	3P9																					



Platform Supply 37": Stand-by Supply

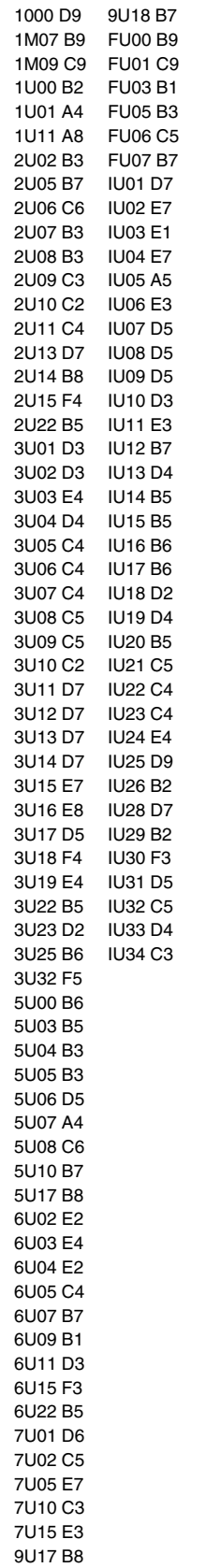
A4 PLATFORM SUPPLY: STANDBY SUPPLY

A4

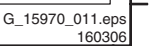


- IS01 E8
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- IS03 F8
- IS04 D10
- IS05 B8
- IS06 B9
- IS07 B8
- IS08 F12
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- IS10 F10
- IS11 F7
- IS12 B9
- IS13 B5
- IS14 D11
- IS15 C4
- IS16 F8
- IS17 E2
- IS18 B6
- IS19 B5
- IS20 E3
- IS21 F2
- IS23 C8
- IS24 C6
- IS25 F2
- IS26 F1
- IS27 F1
- IS28 G1
- IS29 E1
- IS30 C4
- IS32 C5
- IS33 C5
- IS37 D8
- IS38 D8
- IS39 E1
- IS45 E4
- IS47 C3
- IS48 E12
- IS49 D5
- IS50 B6
- IS51 B6
- IS53 G6
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- IS61 F11
- IS68 F11
- IS71 F6
- IS99 D5

A5 25W SUPPLY

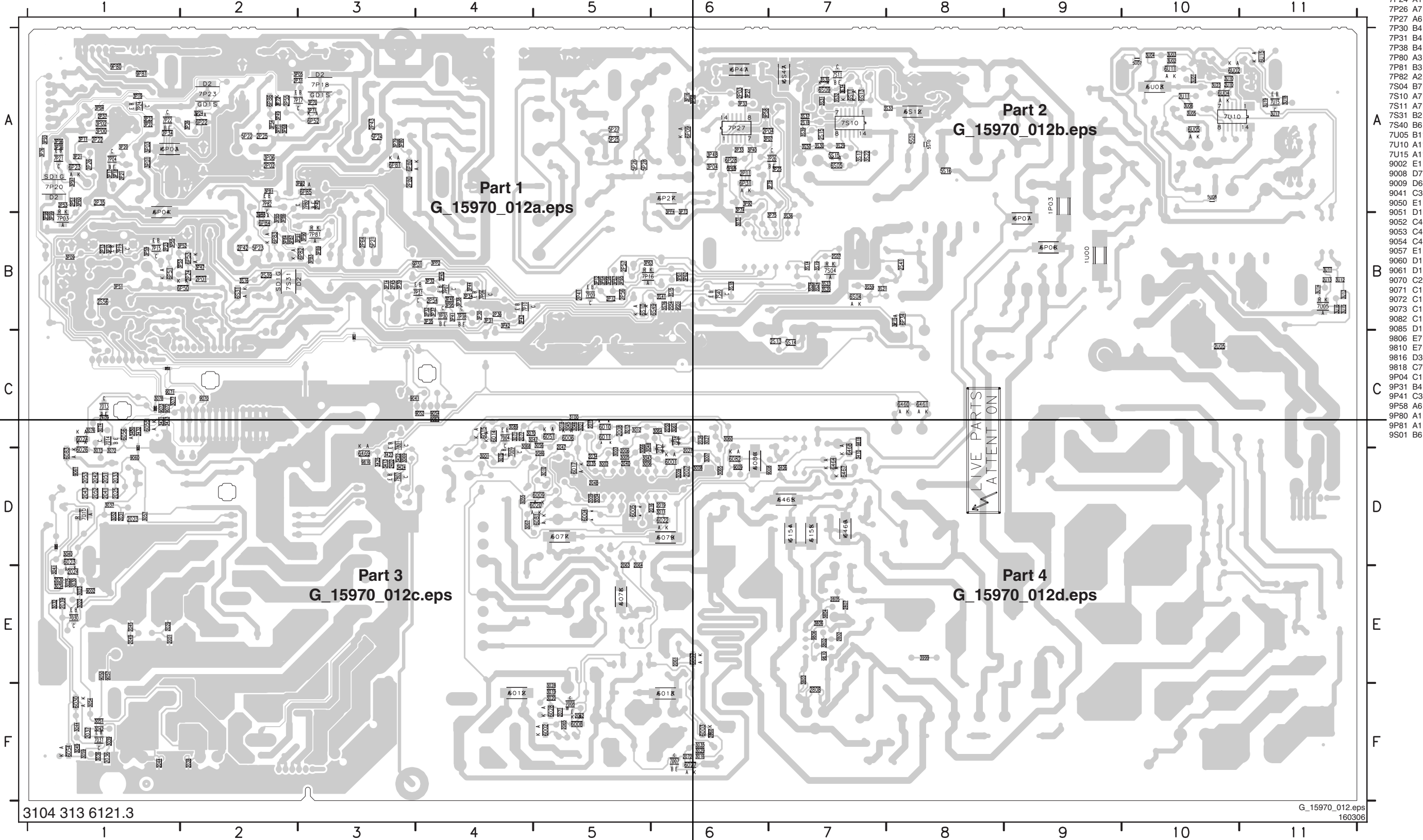


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1000	C3	1319	D10	1M09	D1	1S01	B5	2014	C8	2404	E2	2P06	A8	2P27	A11	2S16	A4	2U15	A2	3053	C6	3800	D5	3S08	A5	5007	E6	5040	F7	5P04	A7	5P19	A11	5U04	B2	6034	E10	6P11	B10	7005	F6	7U02	A2	9016	D7	9030	F10	9043	D11	9092	D8	9821	F10	9P12	A9	9P24	B9	9P37	A8	9P50	B10	9P75	A6	9U03	A2
1002	F9	1320	C10	1M10	A11	1U01	A1	2017	D7	2406	D3	2P07	A4	2P28	A11	2S17	A5	2U22	A1	3058	D6	3805	F5	3S51	A3	5008	F6	5041	F8	5P05	B6	5P20	A11	5U05	A2	6044	F10	6P12	A9	7006	F8	7002	D3	9017	D6	9031	D9	9045	D10	9093	D7	9825	D11	9P13	A10	9P25	C8	9P38	C10	9P51	A10	9P76	A7	9U04	B2
1009	E10	1400	F1	1M18	A11	1U11	B1	2020	F9	2407	C1	2P08	A4	2P29	A11	2S33	B9	3000	D5	3079	E11	3807	E5	3U07	A2	5009	E8	5401	C3	5P06	A6	5S00	A4	5U06	A2	6045	F11	6P13	A10	7805	E5	9003	C2	9018	D7	9032	D9	9046	E1	9098	E4	9P01	C9	9P14	B11	9P26	B9	9P39	B9	9P52	B10	9P78	B8	9U05	D1
1010	E9	1402	F1	1M46	C10	2000	D9	2021	F9	2408	E3	2P09	B3	2P30	A11	2S40	A3	3014	E6	3400	F2	3810	D4	3U08	A3	5010	E7	5402	C2	5P07	A7	5S03	B4	5U10	B2	6462	D5	6S01	B4	7806	F5	9004	E8	9019	D7	9033	D9	9047	E5	9808	E5	9P02	C11	9P15	A10	9P27	B7	9P40	A11	9P52	B10	9P79	A9	9U10	C1
1011	F3	1403	D2	1M63	B10	2002	D7	2022	D9	2803	E3	2P10	B3	2P47	B11	2S50	B6	3015	F6	3401	F1	3P08	A6	3U09	A3	5013	F8	5403	C3	5P08	A6	5S05	A4	5U17	D1	6463	D5	6S02	C5	7807	C5	9005	E3	9020	E8	9034	D6	9055	F10	9811	E5	9P03	C11	9P16	C3	9P28	B9	9P42	A11	9P54	B11	9S03	B6	9U17	C1
1308	F1	1404	E1	1P00	A8	2003	D7	2032	D10	2804	E5	2P14	A7	2P48	B11	2S52	A4	3017	F7	3402	E1	3P28	A7	3U22	A1	5015	D7	5404	D5	5P10	A9	5S08	A5	6018	F11	6807	F4	6S07	B5	7P02	A6	9006	F11	9021	D7	9035	E9	9056	E10	9812	F5	9P05	B11	9P17	A9	9P29	B10	9P43	A6	9P55	A8	9S16	B6	9U18	C2
1310	C9	1405	A1	1P01	A8	2004	C7	2038	C10	2806	E5	2P15	A7	2P49	A9	2U02	A1	3018	F7	3403	C1	3P29	A7	3U25	A1	5016	D6	5405	E2	5P11	A9	5S09	A4	6019	F11	6808	E5	6S30	A3	7P11	B5	9007	D9	9022	F3	9036	E10	9058	E11	9813	E5	9P06	B11	9P18	B9	9P30	B10	9P44	B10	9P56	B3	9S17	B6		
1314	C10	1450	D4	1P05	A5	2005																																																											

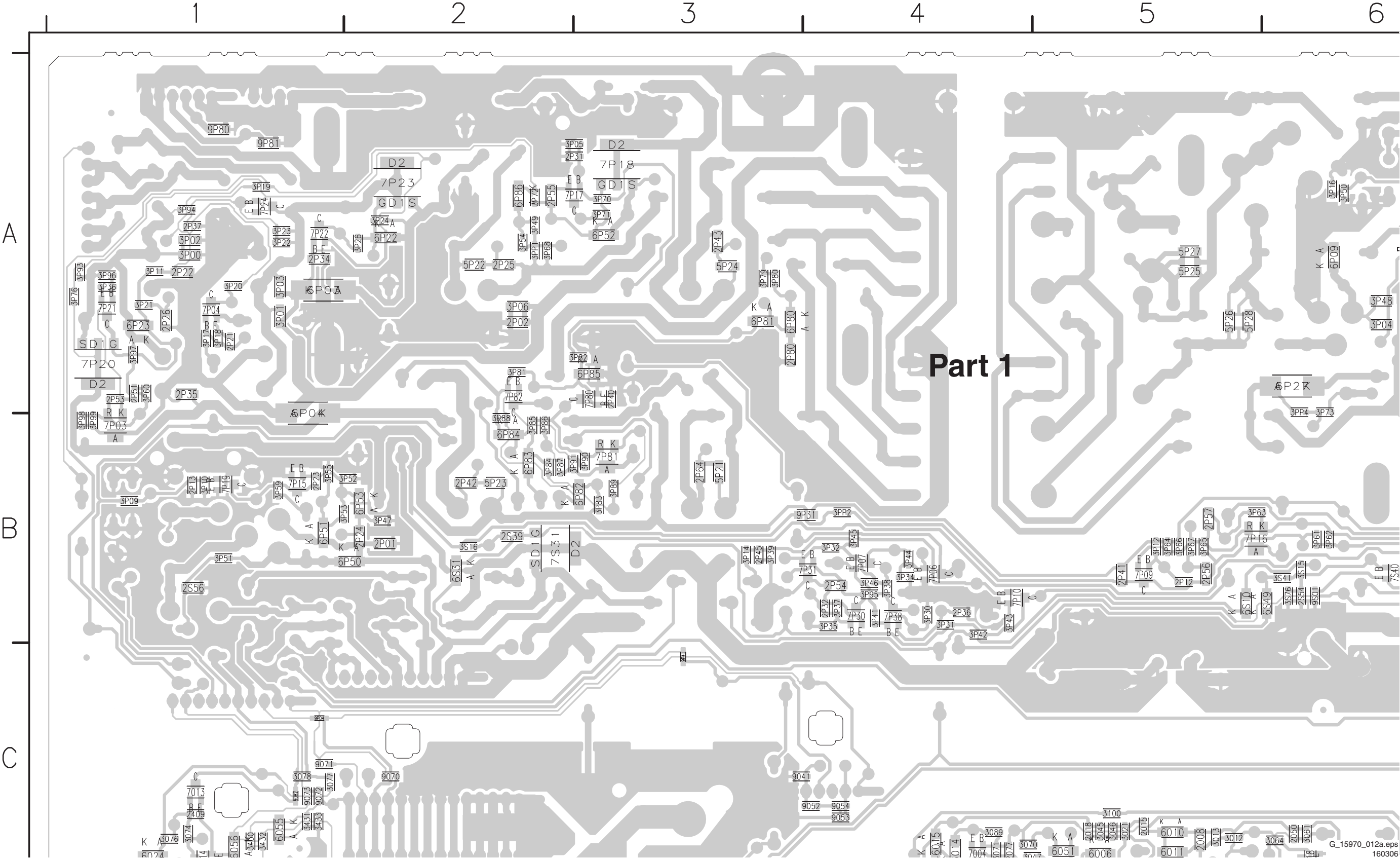


Layout Power Supply 37” (Overview Bottom Side)

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1U00	B9	2027	D6	2043	D1	2063	D5	2P03	A6	2P34	A1	2P57	B5	2U13	B11	3016	F6	3035	F6	3051	F1	3069	D3	3413	D3	3P00	A1	3P16	A6	3P32	B4	3P46	B4	3P63	B5	3P78	A7	3P92	A6	3S17	A7	3S34	A7	3U06	A10	5P23	B2	6002	F5	6017	D5	6078	E5	6468	C7	6P50	B2	6S10	B5	7007	F6	7P06	B4
2001	E1	2028	F2	2044	F1	2064	D5	2P04	A6	2P35	A1	2P64	B3	3001	D4	3019	F5	3036	F1	3052	D1	3070	C4	3422	D3	3P01	A1	3P17	A1	3P33	A6	3P47	B2	3P64	B5	3P79	A3	3P93	A1	3S18	B6	3S35	A7	3U10	A10	5P24	A3	6003	F6	6020	D5	6079	D6	6469	C3	6P51	B1	6S11	A7	7008	F5	7P07	B4
2006	D5	2029	E1	2045	E1	2065	F5	2P11	A6	2P36	B4	2P80	A3	3002	D5	3020	F5	3037	D1	3054	F1	3071	C4	3423	D3	3P02	A1	3P18	A1	3P34	B4	3P48	A6	3P65	B5	3P80	A3	3P94	A1	3S19	B7	3S36	B7	3U11	B11	5P25	A5	6004	D5	6022	D6	6080	C6	6P03	A1	6P52	A3	6S12	A8	7009	D4	7P09	B5
2007	D6	2030	E1	2046	D5	2071	F5	2P12	B5	2P37	A1	2S07	B7	3003	D5	3021	C5	3039	F1	3055	D4	3072	D1	3424	D3	3P03	A1	3P19	A1	3P35	B4	3P49	A2	3P66	B5	3P81	A2	3P95	B4	3S20	B7	3S37	A7	3U12	B11	5P26	A5	6005	D5	6023	D1	6081	D5	6P04	A1	6P53	B2	6S13	A7	7010	D1	7P10	B4
2008	C5	2031	D1	2047	C5	2072	F6	2P13	B1	2P40	A3	2S13	C7	3004	D5	3022	E1	3040	D1	3056	C5	3073	D1	3425	D3	3P04	A6	3P20	A1	3P36	A1	3P50	A6	3P67	B5	3P82	A3	3P96	A1	3S21	B7	3S39	A7	3U13	B11	5P27	A5	6006	C5	6024	C1	6082	D6	6P06	B9	6P80	A3	6S31	B2	7013	C1	7P15	B1
2009	D5	2033	D1	2048	D5	2077	C4	2P21	A1	2P41	B5	2S15	A7	3005	D5	3023	E1	3041	E1	3057	D1	3074	C1	3430	C1	3P05	A3	3P21	A1	3P37	B4	3P51	B1	3P68	A2	3P83	B3	3P97	A1	3S22	A7	3S41	B6	3U14	B11	5P28	A5	6007	E6	6026	D1	6083	D1	6P07	B9	6P81	A3	6S47	A7	7014	C1	7P16	B5
2015	C5	2034	D5	2049	E1	2402	D3	2P22	A1	2P42	B2	2S18	A7	3006	D5	3025	E1	3042	F1	3059	F1	3075	D4	3431	C1	3P06	A2	3P22	A1	3P38	B4	3P52	B2	3P69	A6	3P84	B2	3P98	B1	3S23	B7	3S50	A7	3U15	B11	5S01	A8	6008	F5	6027	F6	6154	D7	6P09	A6	6P82	B3	6S49	B6	7017	D6	7P17	A3
2016	D6	2035	D5	2050	C6	2409	C1	2P23	B1	2P43	A3	2S39	B2	3007	D6	3027	C6	3043	D5	3060	C6	3076	C1	3432	C1	3P07	A6	3P23	A1	3P39	B3	3P53	B1	3P70	A3	3P85	B2	3P99	B1	3S24	B7	3S59	B7	3U16	B11	5S10	A8	6009	D5	6028	F5	6155	D7	6P22	A2	6P83	B2	6U02	A11	7018	C6	7P18	A3
2018	C5	2036	F1	2051	D1	2802	E7	2P24	B2	2P45	B3	2S41	B8	3008	D6	3028	F5	3044	F1	3061	C6	3077	C1	3433	C1	3P09	B1	3P24	A2	3P40	A6	3P54	A2	3P71	A3	3P86	B2	3PP1	A2	3S28	B7	3S76	B6	3U17	A11	5S14	C7	6010	C5	6030	F1	6460	C8	6P23	A1	6P84	B2	6U03	A10	7030	E1	7P19	B1
2019	D6	2037	F1	2052	D1	2805	E7	2P25	A2	2P51	A1	2S54	B6	3009	D6	3029	F6	3045	C5	3064	C6	3078	C1	3802	E7	3P10	B1	3P25	A7	3P41	B4	3P55	B1	3P72	A2	3P87	B2	3PP2	B4	3S29	A7	3U01	A10	3U18	A11	5S15	A7	6011	C5	6051	C5	6461	C8	6P27	A6	6P85	A2	6U04	A11	7031	F1	7P20	A1
2023	D1	2039	E1	2053	D1	2807	E7	2P26	A1	2P53	A1	2S56	B1	3010	D5	3030	E1	3046	C5	3065	D6	3089	C4	3803	E7	3P11	A1	3P26	A2	3P42	B4	3P59	B1	3P73	A6	3P88	B2	3PP4	A6	3S30	A7	3U02	A10	3U19	A11	5S16	A8	6012	E4	6054	F1	6464	D7	6P28	A6	6P86	A2	6U05	A10	7801	C3	7P21	A1
2024	E1	2040	D5	2060	F6	2808	F7	2P31	A3	2P54	B4	2U05	C10	3011	D6	3031	B6	3047	C4	3066	D5	3100	C5	3804	E7	3P12	B5	3P27	A6	3P43	B4	3P60	A1	3P74	A6	3P89	B3	3S14	B7	3S31	A7	3U03	A10	3U23	A10	5U07	A10	6013	E6	6055	C1	6465	D6	6P31	A6	6S04	B7	6U11	A10	7802	D3	7P22	A1
2025	D1	2041	D1	2061	E6	2P01	B2	2P32	B4	2P55	A2	2U10	A10	3012	C5	3032	E1	3048	C5	3067	D4	3406	D7	3806	E7	3P14	B3	3P30	B4	3P44	B4	3P61	B6	3P75	B7	3P90	B3	3S15	B6	3S32	A7	3U04	A10	5P21	B3	5U08	A10	6014	C4	6056	C1	6466	D7	6P34	B8	6S05	A7	6U15	A11	7P03	A1	7P23	A2

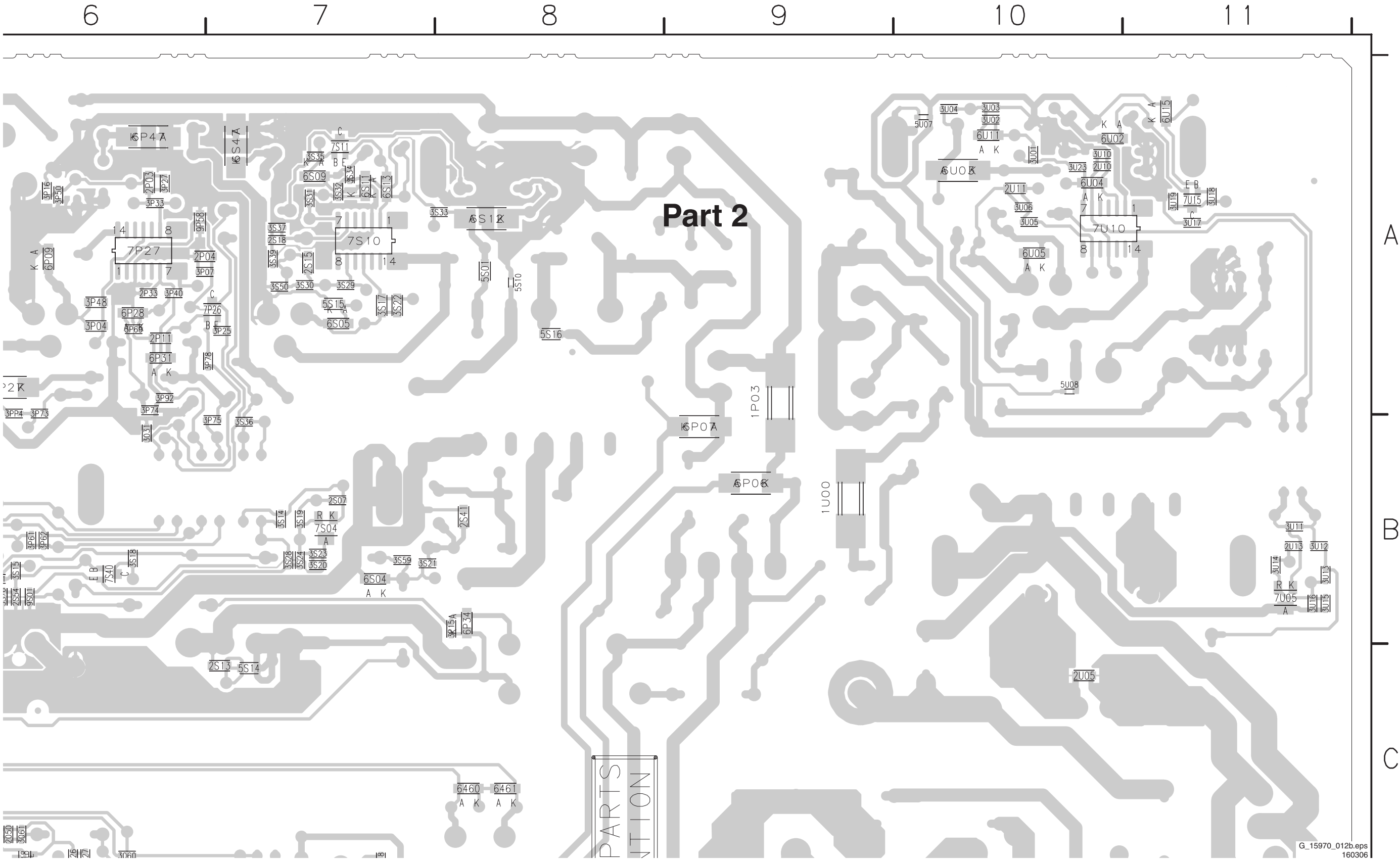


Layout Power Supply 37" (Part 1 Bottom Side)



Part 1

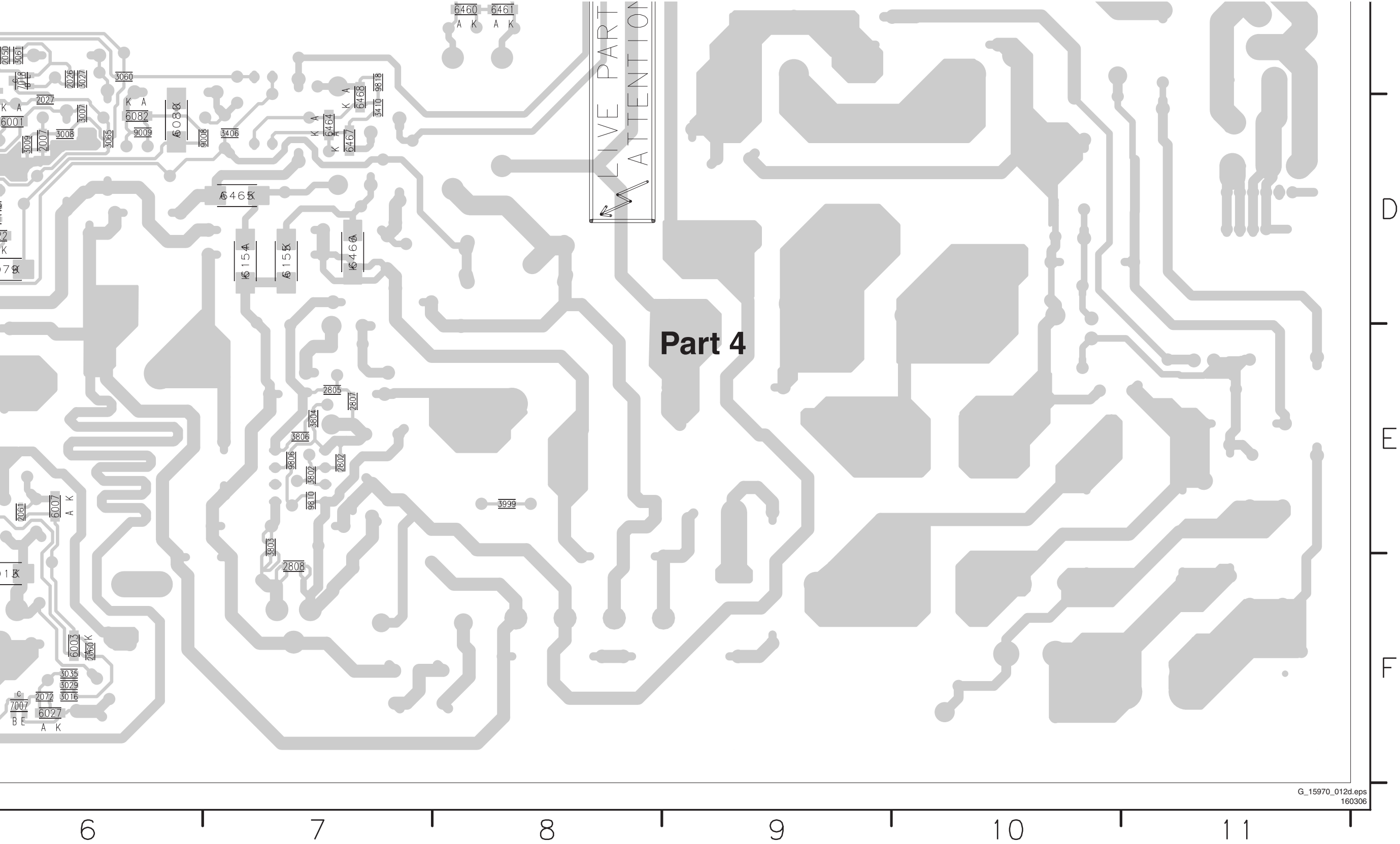
Layout Power Supply 37" (Part 2 Bottom Side)



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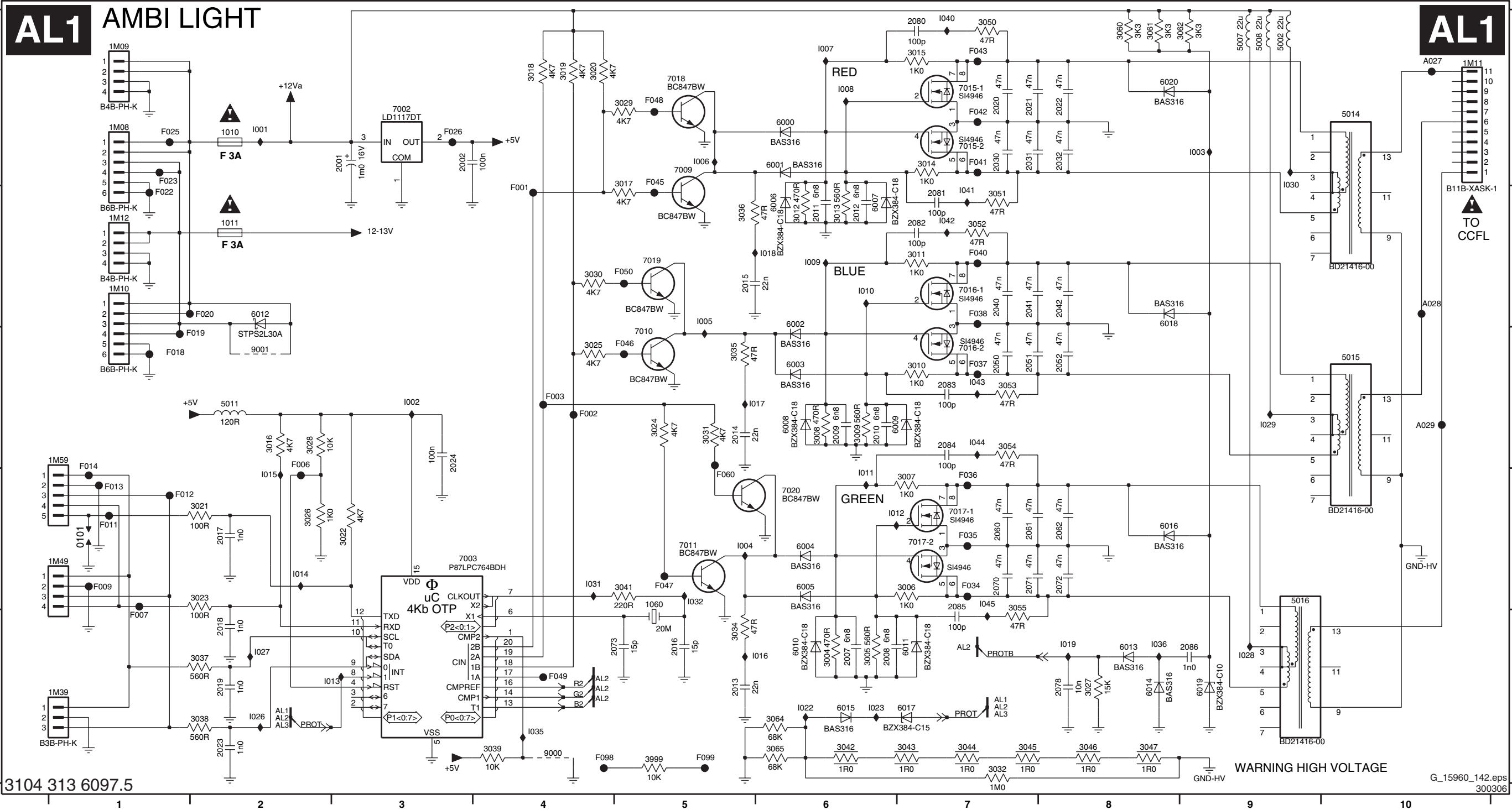


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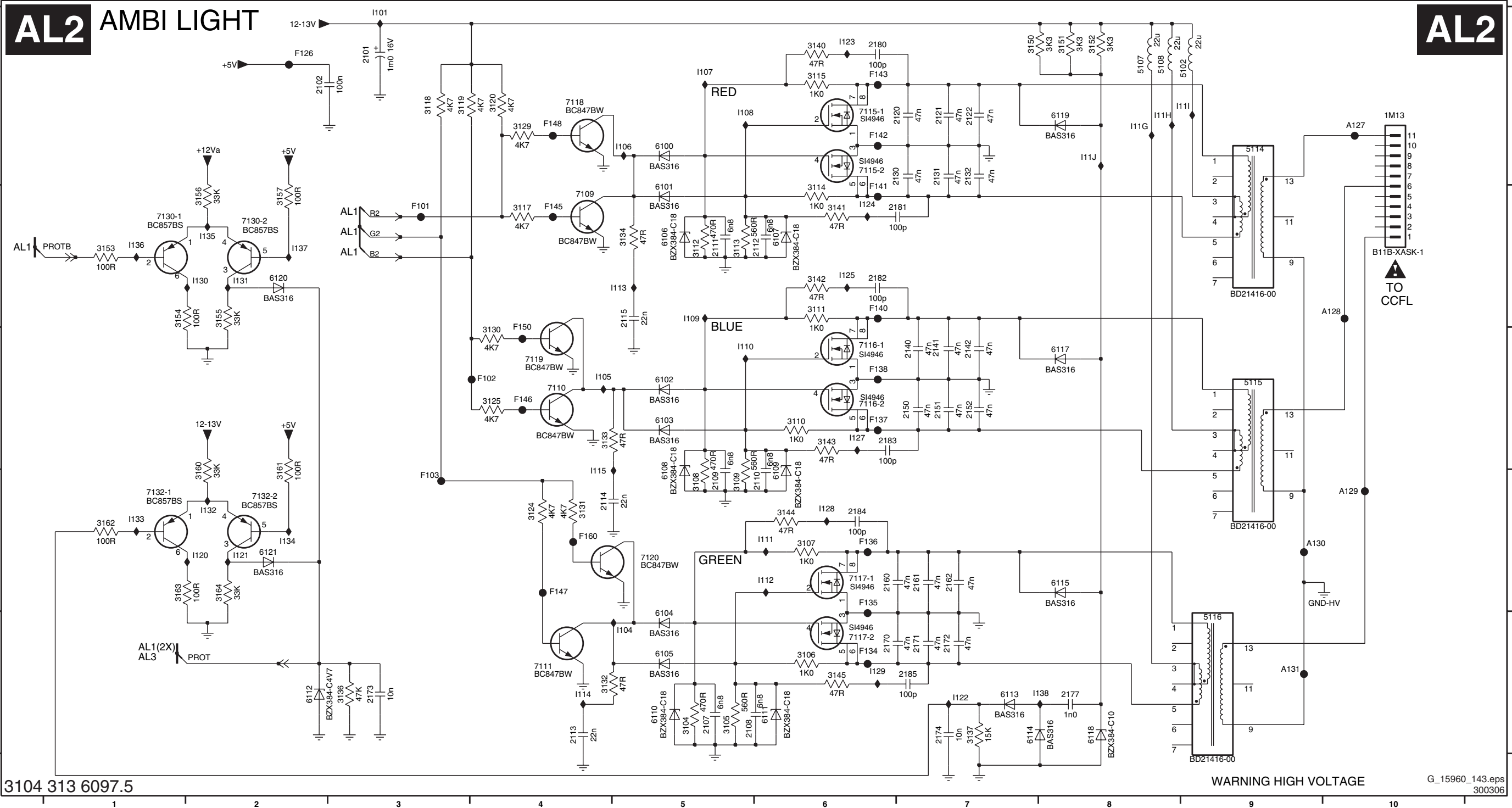
Ambi Light

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1010 A2	2002 A3	2018 E2	2042 B8	2080 A7	3009 C6	3021 D2	3034 E5	3047 E8	3999 E5	6004 D6	6016 D8	7016-1 B7	F001 B4	F020 B2	F042 A7	I002 C3	I014 D2	I030 A9
1011 B2	2007 E6	2019 E2	2050 C7	2081 B7	3010 C7	3022 D3	3035 C5	3050 A7	5002 A9	6005 D6	6017 E7	7016-2 C7	F002 C4	F022 B1	F043 A7	I003 A9	I015 D2	I031 D4
1060 D5	2008 E6	2020 A7	2051 C7	2082 B7	3011 B7	3023 D2	3036 B5	3051 B7	5007 A9	6006 B6	6018 B8	7017-1 D7	F003 C4	F023 A1	F045 A5	I004 D5	I016 E6	I032 D5
1M08 A1	2009 C6	2021 A7	2052 C8	2083 C7	3012 B6	3024 C5	3037 E2	3052 B7	5008 A9	6007 B6	6019 E9	7017-2 D7	F006 C2	F025 A1	F046 C5	I005 B5	I017 C6	I035 E4
1M09 A1	2010 C6	2022 A8	2060 D7	2084 C7	3013 B6	3025 C4	3038 E2	3053 C7	5011 C2	6008 C6	6020 A8	7018 A5	F007 E1	F026 A3	F047 D5	I006 A5	I018 B6	I036 E8
1M10 B1	2011 B6	2023 E2	2061 D7	2085 D7	3014 A7	3026 D2	3039 E4	3054 C7	5014 A10	6009 C6	7002 A3	7019 B5	F009 D1	F034 D7	F048 A5	I007 A6	I019 E8	I040 A7
1M11 A10	2012 B6	2024 C3	2062 D8	2086 E9	3015 A7	3027 E8	3041 D5	3055 E7	5015 C10	6010 E6	7003 D3	7020 D6	F011 D1	F035 D7	F049 E4	I008 A6	I022 E6	I041 B7
1M12 B1	2013 E5	2030 A7	2070 D7	3004 E6	3016 C2	3028 C2	3042 E6	3060 A8	5016 D9	6011 E7	7009 A5	9000 E4	F012 D1	F036 D7	F050 B5	I009 B6	I023 E6	I042 B7
1M39 E1	2014 C5	2031 A7	2071 D7	3005 E6	3017 B5	3029 A5	3043 E7	3061 A8	6000 A6	6012 B2	7010 C5	9001 C2	F013 D1	F037 C7	F060 D5	I010 B6	I026 E2	I043 C7
1M49 D1	2015 B5	2032 A8	2072 D8	3006 D7	3018 A4	3030 B4	3044 E7	3062 A9	6001 A6	6013 E8	7011 D5	A027 A10	F014 D1	F038 B7	F098 E4	I011 D6	I027 E2	I044 C7
1M59 C1	2016 E5	2040 B7	2073 E5	3007 D7	3019 A4	3031 C5	3045 E7	3064 E6	6002 B6	6014 E8	7015-1 A7	A028 B10	F018 C1	F040 B7	F099 E5	I012 D6	I028 E9	I045 D7



Ambi Light

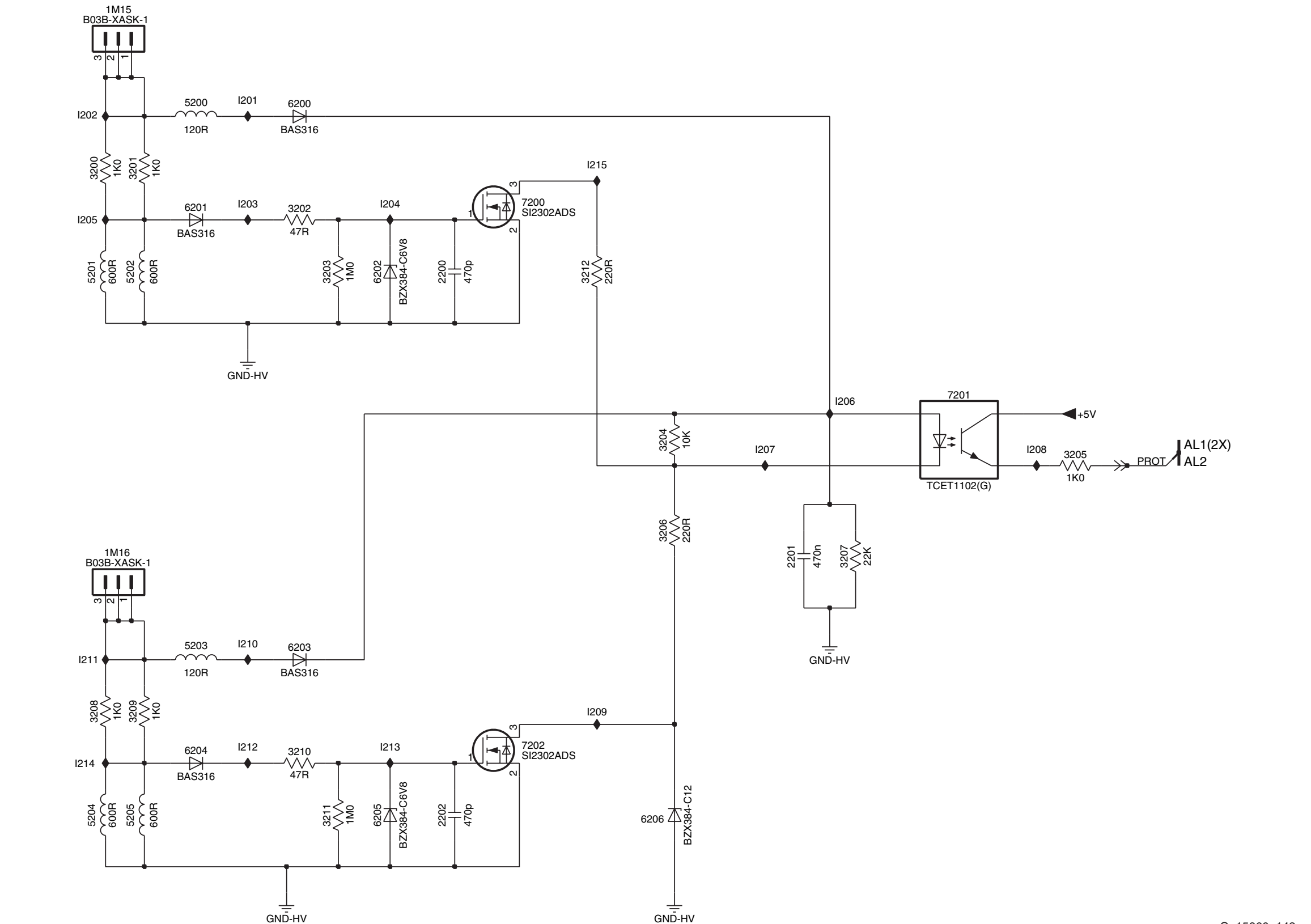
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2101 A3	2113 E4	2132 A7	2161 D7	2180 A6	3106 E6	3114 B6	3129 A4	3140 A6	3152 A8	3162 D1	5116 E9	6107 B6	6115 D8	7111 E4	7119 C4	A129 D10	F135 D6	F145 B4	I105 C4	I113 B5	I121 D2	I130 B2	I138 E8
2102 A2	2114 D4	2140 C7	2162 D7	2181 B7	3107 D6	3115 A6	3130 C4	3141 B6	3153 B1	3163 D1	6100 A5	6108 D5	6117 C8	7115-1 A6	7120 D5	A130 D9	F136 D6	F146 C4	I106 A5	I114 E4	I122 E7	I131 B2	
2107 E5	2115 B5	2141 C7	2170 E6	2182 B6	3108 D5	3117 B4	3131 D4	3142 B6	3154 B1	3164 D2	6101 B5	6109 D6	6118 E8	7115-2 A6	7130-1 B1	A131 E9	F137 C6	F147 D4	I107 A5	I115 D4	I123 A6	I132 D2	
2108 E5	2120 A6	2142 C7	2171 E7	2183 C6	3109 D5	3118 A3	3132 E4	3143 C6	3155 B2	5102 A9	6102 C5	6110 E5	6119 A8	7116-1 C6	7130-2 B2	F101 B3	F138 C6	F148 A4	I108 A5	I11G A8	I124 B6	I133 D1	
2109 D5	2121 A7	2150 C7	2172 E7	2184 D6	3110 C6	3119 A3	3133 C4	3144 D6	3156 B2	5107 A8	6103 C5	6111 E6	6120 B2	7116-2 C6	7132-1 D1	F102 C4	F140 B6	F150 C4	I109 B5	I11H A8	I125 B6	I134 D2	
2110 D6	2122 A7	2151 C7	2173 E3	2185 E7	3111 B6	3120 A4	3134 B5	3145 E6	3157 B2	5108 A8	6104 E5	6112 E2	6121 D2	7117-1 D6	7132-2 D2	F103 D3	F141 B6	F160 D4	I110 C5	I111 A9	I127 C6	I135 B2	
2111 B5	2130 A6	2152 C7	2174 E7	3104 E5	3112 B5	3124 D4	3136 E3	3150 A7	3160 D2	5114 A9	6105 E5	6113 E7	7109 B4	7117-2 E6	A127 A10	F126 A2	F142 A6	I101 A3	I111 D6	I11J A8	I128 D6	I136 B1	



Ambi Light

AL3 AMBI LIGHT

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300306

- 1M15 A1
- 1M16 D1
- 2200 B3
- 2201 D5
- 2202 E3
- 3200 B1
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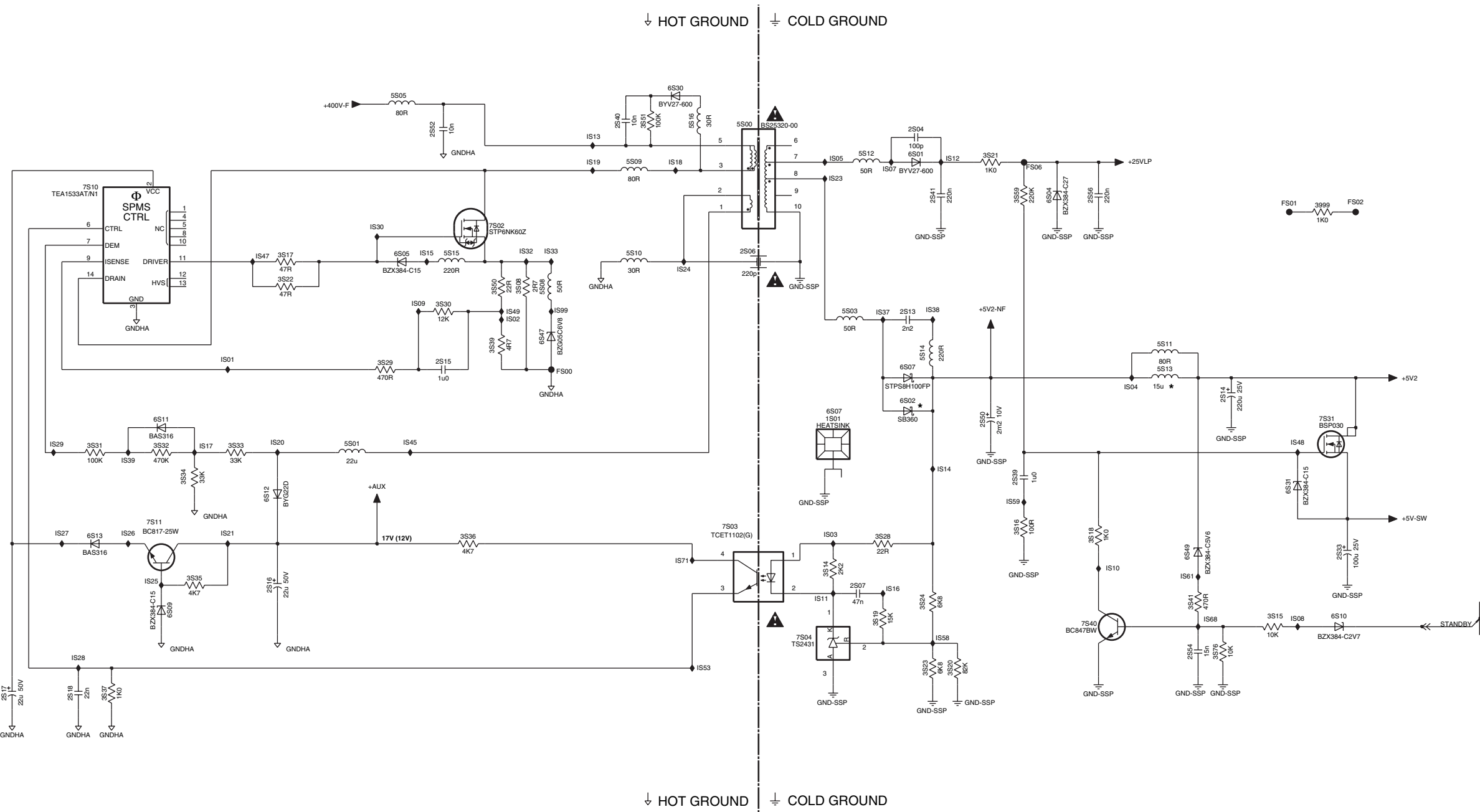
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2010	E2	3015	D2	6011	E2
2011	D2	3016	D2	6100	A1
2012	D2	3017	D2	6101	A1
2013	E2	3018	E2	6102	B1
2014	E1	3019	D2	6103	B1
2015	D2	3020	D2	6104	C2
2017	D2	3021	D2	6105	C1
2018	C2	3023	C2	6106	A2
2019	C2	3024	E2	6107	A2
2020	C2	3025	D2	6108	B2
2021	C2	3026	E2	6109	B2
2022	C2	3028	D2	6110	C2
2023	C2	3029	D2	6111	B2
2030	C1	3030	D2	6200	C1
2031	C1	3031	E2	6201	C1
2032	C1	3034	E2	6203	E1
2040	D2	3035	E2	6204	E1
2041	D2	3036	D2	7003	C2
2042	D2	3037	C2	7009	D2
2050	D1	3038	C2	7010	D2
2051	D1	3039	C2	7011	E2
2052	D1	3050	D2	7015	C2
2060	E2	3051	D2	7016	D2
2061	E2	3052	D2	7017	E2
2062	E2	3053	D2	7018	D2
2070	E1	3054	E2	7019	E2
2071	E2	3055	E2	7020	E2
2072	E2	3104	C2	7109	A2
2080	D2	3105	B2	7110	A2
2081	D2	3106	B1	7111	C2
2082	D2	3107	B2	7115	A2
2083	D2	3108	B2	7116	A2
2084	E2	3109	B2	7117	B2
2085	E2	3110	A2	7118	A2
2107	C2	3111	B2	7119	A2
2108	B1	3112	A2	7120	C2
2109	B2	3113	A2	9000	C2
2110	B2	3114	A1	9001	B2
2111	A2	3115	A2		
2112	A2	3117	A2		
2113	C2	3118	B2		
2114	B2	3119	B2		
2115	A2	3120	B2		
2120	A2	3124	B2		
2121	A2	3125	A2		
2122	A2	3129	A2		
2130	A1	3130	A2		
2131	A2	3131	B2		
2132	A2	3132	C2		
2140	A2	3133	B2		
2141	A2	3134	A1		
2142	A2	3140	A2		
2150	A1	3141	A2		
2151	A2	3142	A2		
2152	A2	3143	B2		
2160	B2	3144	B2		
2161	B2	3145	B2		
2162	B2	3200	B1		
2170	B1	3201	B1		
2171	B2	3208	E1		
2172	B2	3209	E1		
2173	C2	3999	A1		
2180	A2	5200	C1		
2181	A2	5201	B1		
2182	A2	5202	C1		
2183	A2	5203	E1		
2184	B2	5204	E1		
2185	B2	5205	E1		
3004	E2	6000	D2		
3005	E1	6001	D2		
3006	E1	6002	D2		
3007	E2	6003	E2		
3008	E2	6004	E2		
3009	E2	6005	E2		
3010	D1	6006	D2		

[illegible]

Platform Supply 42": Stby Supply

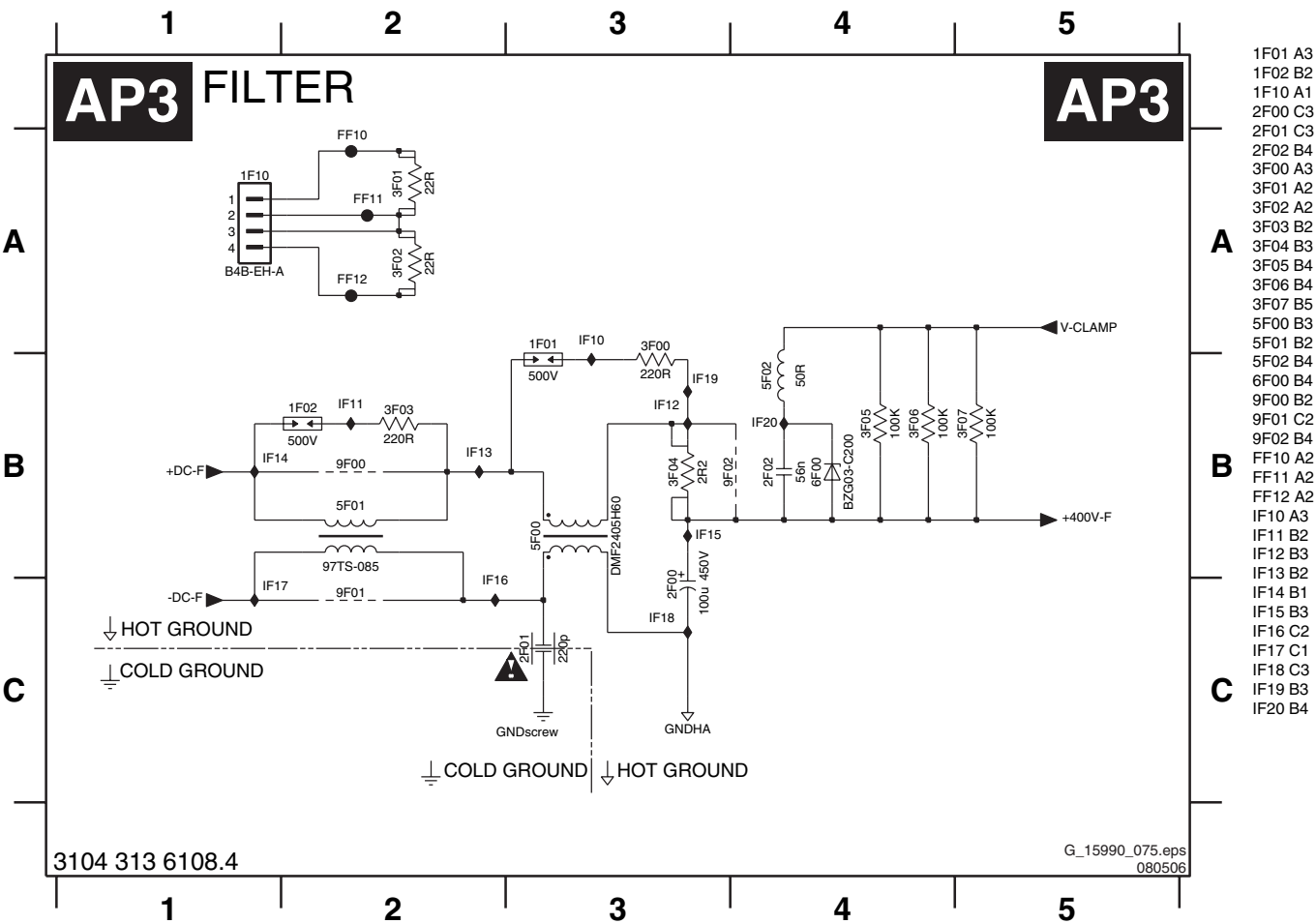
AP2 PLATFORM SUPPLY: STANDBY SUPPLY

AP2



- IS01 E8
- IS02 B8
- IS03 C7
- IS04 F8
- IS05 D8
- IS06 E11
- IS07 D4
- IS08 C9
- IS09 B5
- IS10 E8
- IS11 C4
- IS12 F8
- IS13 E2
- IS14 C6
- IS15 C5
- IS16 E3
- IS17 F2
- IS18 C8
- IS19 D6
- IS20 C10
- IS21 F2
- IS22 C8
- IS23 D6
- IS24 F2
- IS25 F1
- IS26 F1
- IS27 F1
- IS28 G1
- IS29 E1
- IS30 C4
- IS31 C5
- IS32 D8
- IS33 C5
- IS34 D8
- IS35 D8
- IS36 D8
- IS37 D8
- IS38 D8
- IS39 E1
- IS40 E4
- IS41 C3
- IS42 E12
- IS43 D5
- IS44 G6
- IS45 G8
- IS46 F9
- IS47 F11
- IS48 G11
- IS49 F6
- IS50 D5
- IS51 C8
- IS52 G12
- IS53 F10
- IS54 B5
- IS55 E8
- IS56 C4
- IS57 F8
- IS58 E2
- IS59 C6
- IS60 C5
- IS61 F2
- IS62 C8
- IS63 D6
- IS64 F2
- IS65 F1
- IS66 F1
- IS67 F1
- IS68 G1
- IS69 E1
- IS70 E4
- IS71 C3
- IS72 E12
- IS73 D5
- IS74 G6
- IS75 G8
- IS76 F9
- IS77 F11
- IS78 G11
- IS79 F6
- IS80 D5
- IS81 C8
- IS82 G12
- IS83 F10
- IS84 B5
- IS85 E8
- IS86 C4
- IS87 F8
- IS88 E2
- IS89 C6
- IS90 C5
- IS91 F2
- IS92 C8
- IS93 D6
- IS94 F2
- IS95 F1
- IS96 F1
- IS97 F1
- IS98 G1
- IS99 E1

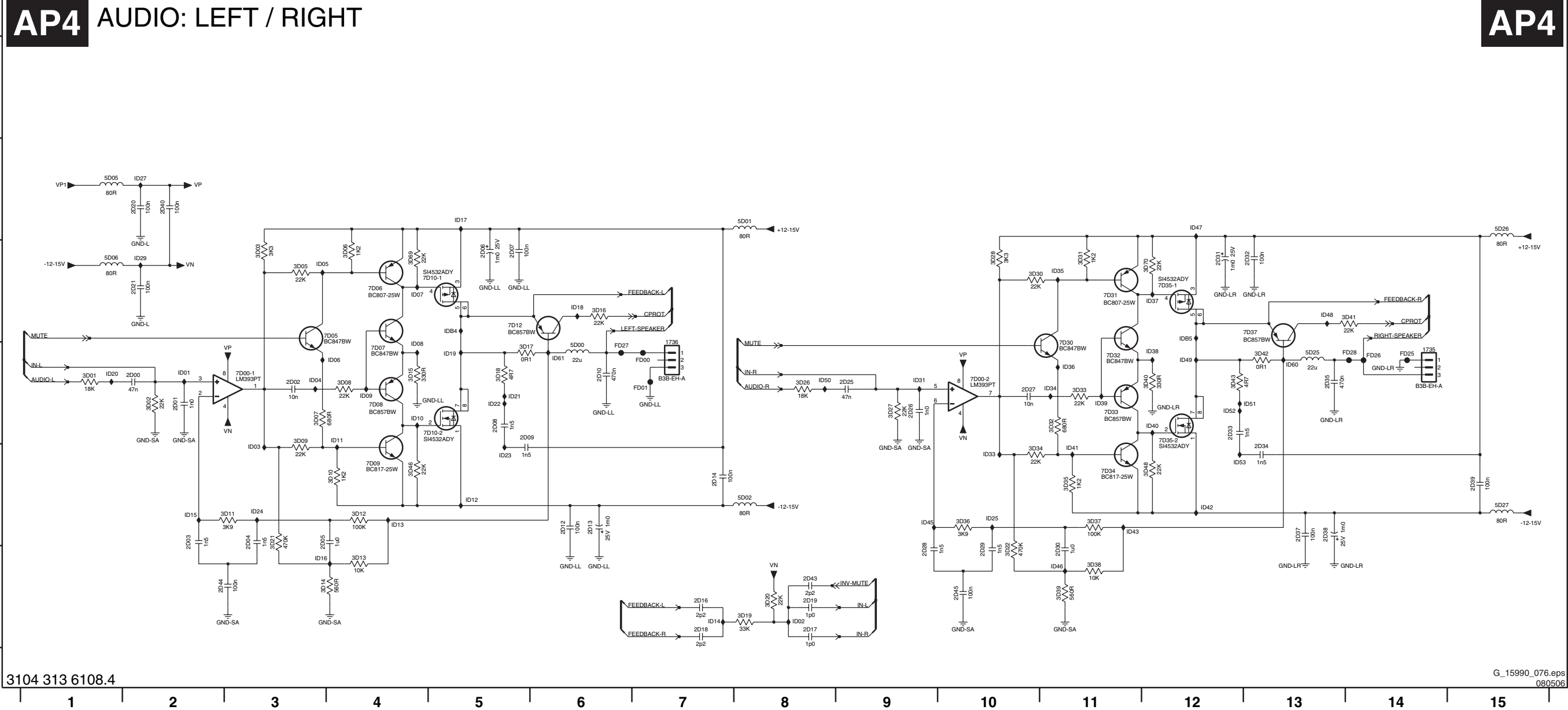
Platform Supply 42": Filter



Personal Notes:

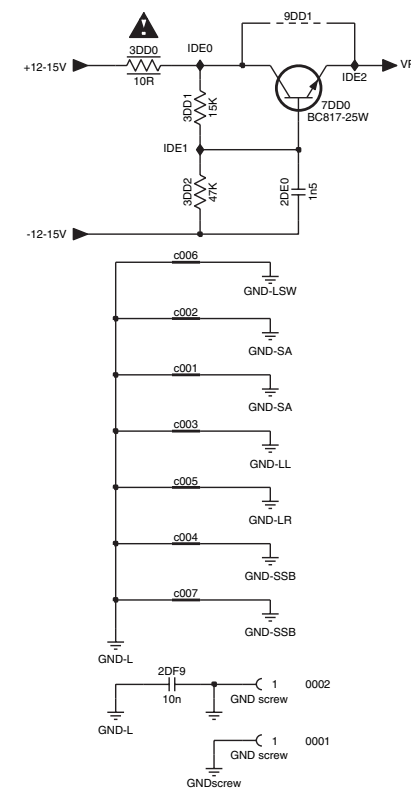
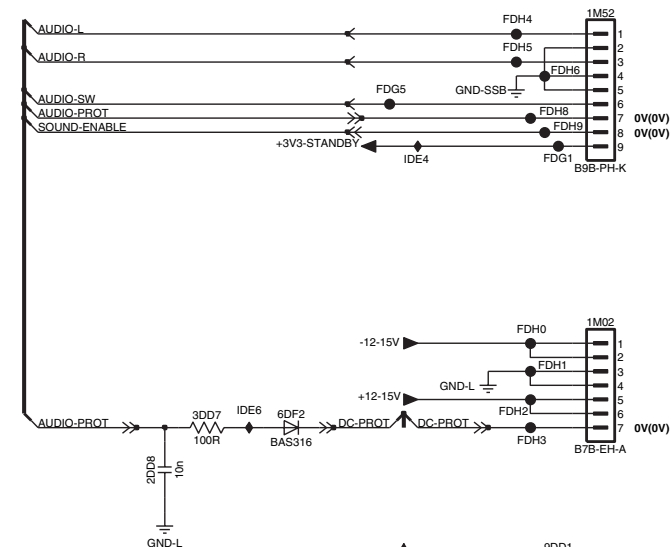
Platform Supply 42": Audio Left/Right

1735 D14	2D04 E3	2D10 D6	2D18 F7	2D27 D10	2D33 D12	2D40 B2	3D03 C3	3D10 E4	3D16 C6	3D22 F10	3D32 D11	3D38 F11	3D46 E4	5D02 E8	7D00-1 D3	7D09 E4	7D32 D11	FD00 D7	ID01 D2	ID07 C4	ID13 E4	ID19 D5	ID25 E10	ID35 C11	ID41 E11	ID48 C13	ID60 D13
1736 D7	2D05 E3	2D12 E6	2D19 F8	2D28 F9	2D34 D13	2D43 F8	3D05 C3	3D11 E3	3D17 D5	3D26 D8	3D33 D11	3D39 F11	3D48 E12	5D05 B1	7D00-2 D10	7D10-1 C4	7D33 D11	FD01 D7	ID02 F8	ID08 D4	ID14 F7	ID20 D1	ID27 B2	ID36 D11	ID42 E12	ID49 D12	ID61 D6
2D00 D2	2D06 C5	2D13 E6	2D20 B2	2D29 F10	2D35 D13	2D44 F2	3D06 C4	3D12 E4	3D18 D5	3D27 D9	3D34 E10	3D40 D12	3D69 C4	5D06 C1	7D05 C3	7D10-2 D4	7D34 E11	FD05 D14	ID03 E3	ID09 D4	ID15 E2	ID21 D5	ID29 C2	ID37 C12	ID43 E11	ID50 D8	ID64 C5
2D01 D2	2D07 C5	2D14 E7	2D21 C2	2D30 F11	2D37 E13	2D45 F10	3D07 D3	3D13 F4	3D19 F8	3D28 C10	3D35 E11	3D41 C14	3D70 C12	5D25 D13	7D06 C4	7D12 C5	7D35-1 C12	FD26 D14	ID04 D3	ID10 D4	ID16 F3	ID22 D5	ID31 D9	ID38 D12	ID45 E9	ID51 D13	ID65 C12
2D02 D3	2D08 D5	2D16 F7	2D25 D9	2D31 C12	2D38 E13	3D01 D1	3D08 D4	3D14 F3	3D20 F8	3D30 C10	3D36 E10	3D42 D13	5D00 D6	5D26 B15	7D07 D4	7D30 D11	7D35-2 D12	FD27 D6	ID05 C3	ID11 D4	ID17 B5	ID23 E5	ID33 E10	ID39 D11	ID46 F11	ID52 D12	
2D03 E2	2D09 D5	2D17 F8	2D26 D9	2D32 C13	2D39 E15	3D02 D2	3D09 D3	3D15 D4	3D21 E3	3D31 C11	3D37 E11	3D43 D12	5D01 B8	5D27 E15	7D08 D4	7D31 C11	7D37 C12	FD28 D14	ID06 D4	ID12 E5	ID18 C6	ID24 E3	ID34 D11	ID40 D12	ID47 B12	ID53 E12	



AUDIO: PROTECTION / MUTE CONTROL

AP5

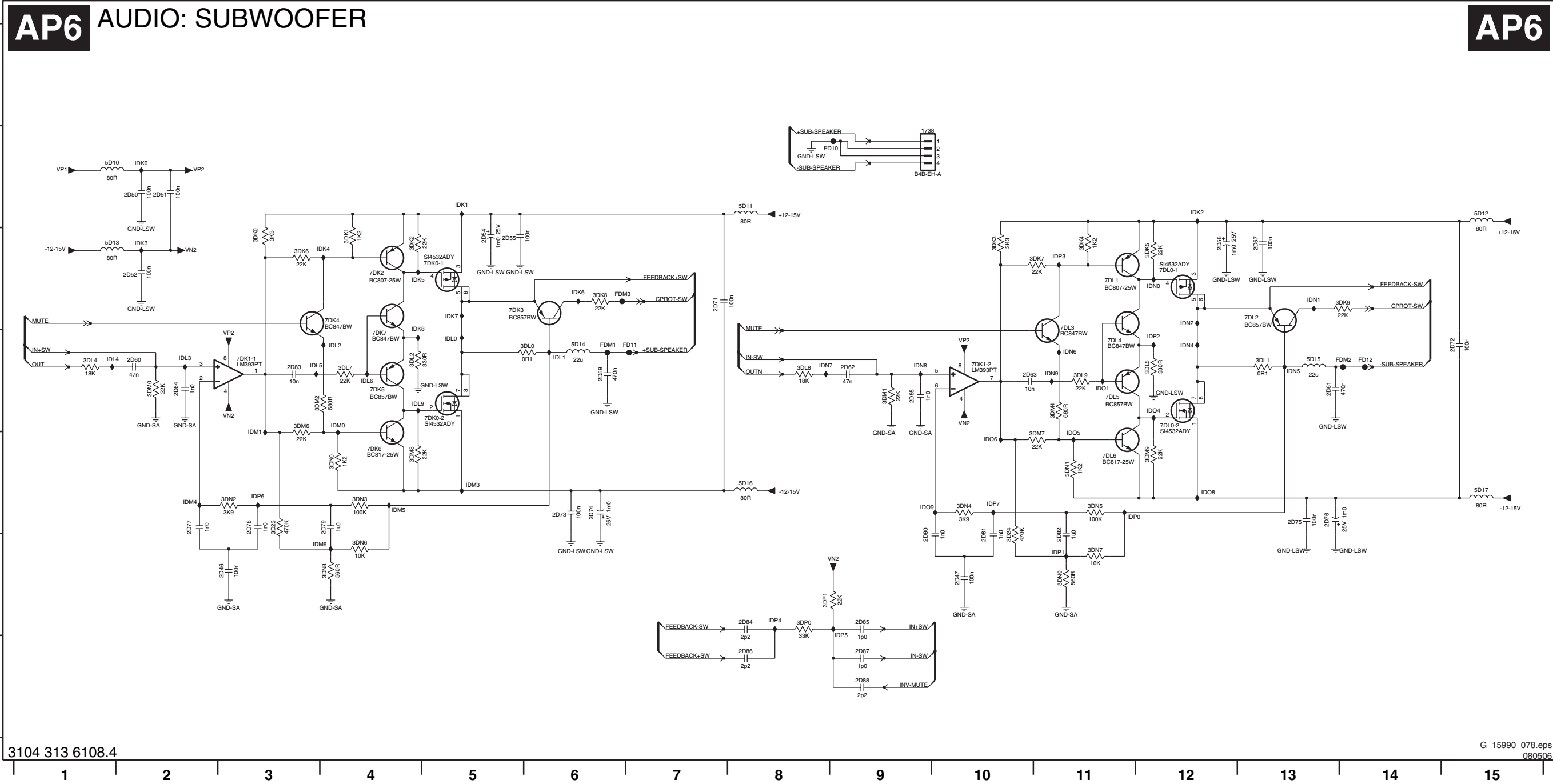


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080506

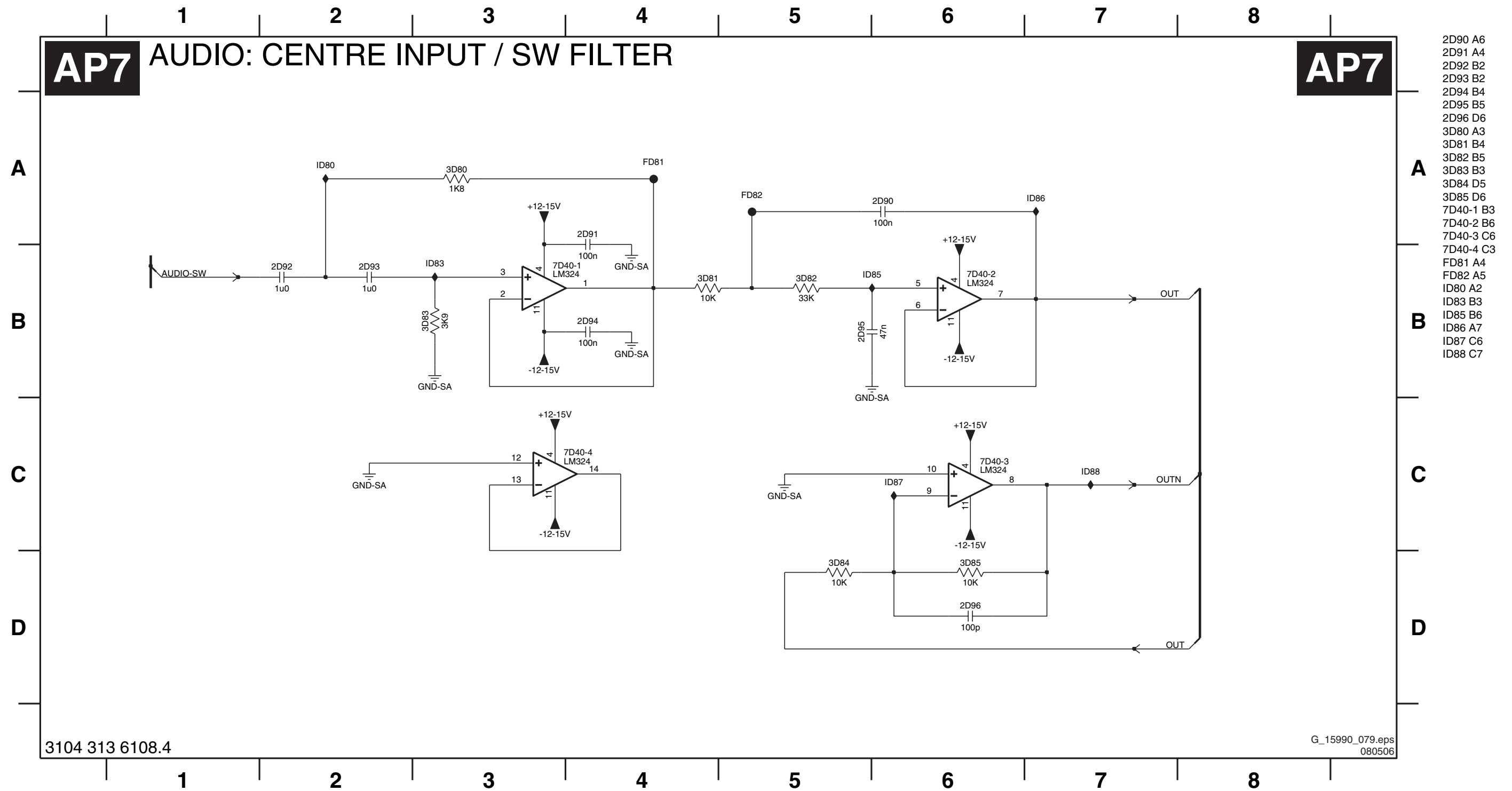
0001 H11	IDF8 E4
0002 H11	IDF9 F6
1M02 C11	IDG0 F6
1M51 B11	IDG1 G5
2DD1 G3	IDG4 F3
2DD2 D6	IDG5 F1
2DD4 G6	IDG6 F1
2DD5 G3	IDG7 F3
2DD6 E3	IDG8 G1
2DD7 E4	c001 F10
2DD8 D9	c002 F10
2DE0 E11	c003 F10
2DF0 C3	c004 G10
2DF2 B4	c005 G10
2DF3 C4	c006 F10
2DF5 F1	c007 G10
2DF9 H10	
3DD0 E10	
3DD1 E10	
3DD2 E10	
3DD3 B4	
3DD4 F1	
3DD5 G1	
3DD6 F2	
3DD7 D9	
3DF2 C2	
3DF3 C2	
3DF4 B3	
3DF5 B3	
3DF6 B4	
3DF7 D3	
3DF8 D4	
3DF9 D5	
3DG0 F1	
3DG1 G2	
3DG2 F3	
3DG3 E5	
3DG4 G3	
3DG5 G5	
3DG6 G5	
3DG7 F6	
3DG8 D6	
3DG9 D6	
3DH0 C5	
3DH1 C5	
3DH2 E4	
3DH4 E4	
3DH5 E6	
3DH6 E3	
3DH7 E4	
3DI0 B2	
3DI1 C2	
3DI2 G3	
6DF0 C5	
6DF1 F1	
6DF2 D10	
7DD0 E11	
7DF0 G3	
7DF1 F3	
7DF2 F4	
7DF3 D6	
7DF4 D6	
7DF5 G6	
7DF6 F6	
7DF7-1 B4	
7DF7-2 C4	
7DF8 E4	
7DF9 G1	
7DH1 G2	
9DD1 D11	
FDG1 B11	
FDG2 D3	
FDG3 F5	
FDG4 E3	
FDG5 B10	
FDH0 C11	
FDH1 C11	
FDH2 D11	
FDH3 D11	
FDH4 B11	
FDH5 B11	
FDH6 B11	
FDH7 B4	
FDH8 B11	
FDH9 B11	
IDE0 E11	
IDE1 E10	
IDE2 E11	
IDE3 B5	
IDE4 B10	
IDE6 D10	
IDF0 C3	
IDF2 B4	
IDF4 D5	
IDF5 F4	
IDF6 F1	
IDF7 D6	

Platform Supply 42": Audio Prot / Mute

1738 B9	2D54 C5	2D61 D13	2D72 D15	2D78 E3	2D84 F8	3D24 F10	3DK5 C12	3DL1 D13	3DL9 D11	3DM7 E11	3DN3 E4	3DN9 F11	5D13 C1	7DK0-2 D5	7DK5 D4	7DL2 C13	FD11 D7	IDK1 B5	IDK7 C5	IDL4 D1	IDM5 E5	IDN2 C12	IDN9 D11	IDO9 E9	IDP5 F9
2D46 F3	2D55 C5	2D62 D9	2D73 E6	2D79 E4	2D85 F9	3DK0 C3	3DK6 C3	3DL2 D4	3DM0 D2	3DM8 E4	3DN4 E10	3DP0 F8	5D14 D6	7DK1-1 D3	7DK6 E4	7DL3 D11	FD12 D14	IDK2 B12	IDK8 C4	IDL5 D3	IDM4 E2	IDN4 D12	IDO4 D11	IDP0 E11	IDP6 E3
2D47 F10	2D56 C12	2D63 D10	2D74 E6	2D80 F9	2D86 G8	3DK1 C4	3DK7 C11	3DL4 D1	3DM1 D9	3DM9 E12	3DN5 E11	3DP1 F8	5D15 D13	7DK1-2 D10	7DK7 D4	7DL4 D11	FDM1 D6	IDK3 C2	IDL6 D5	IDM5 E4	IDN5 D13	IDO4 D12	IDP1 F11	IDP7 E10	
2D50 B2	2D57 C13	2D64 D2	2D75 E13	2D81 F10	2D87 G9	3DK2 C4	3DK8 C6	3DL5 D12	3DM2 D3	3DN0 E4	3DN6 F4	5D10 B1	5D16 E8	7DK2 C4	7DL0-1 C12	7DL5 D11	FDM2 D14	IDK4 C4	IDL7 D6	IDM6 F3	IDN6 D11	IDO5 E11	IDP2 D12		
2D51 B2	2D59 D6	2D65 D9	2D76 E13	2D82 F11	2D88 G9	3DK3 C10	3DK9 C14	3DL7 D4	3DM4 D11	3DN1 E11	3DN7 F11	5D11 B8	5D17 E15	7DK3 C5	7DL0-2 D12	7DL6 E11	FDM3 C6	IDK5 C4	IDL2 D4	IDM0 C12	IDN0 C12	IDO6 E10	IDP3 C11		
2D52 C2	2D60 D2	2D71 C7	2D77 E2	2D83 D3	3D23 E3	3DK4 C11	3DL0 D6	3DL8 D8	3DM6 D3	3DN2 E3	3DN8 F4	5D12 B15	7DK0-1 C5	7DK4 C4	7DL1 C11	7DL0 B9	IDK0 B2	IDK6 C6	IDL3 D2	IDM1 C13	IDN8 D9	IDO8 E12	IDP4 F8		



Platform Supply 42": Audio Centre



Platform Supply 42”: SRP List

Net Name	Diagram
+12-15V	AP1 (4x)
+12-15V	AP4 (4x)
+12-15V	AP5 (12x)
+12-15V	AP6 (4x)
+12-15V	AP7 (8x)
+12V	AP1 (4x)
+12V_NF	AP1 (2x)
+12VAL	AP1 (2x)
+25VLP	AP1 (4x)
+25VLP	AP2 (1x)
+3V3-STANDBY	AP5 (3x)
+400V-F	AP1 (2x)
+400V-F	AP2 (2x)
+400V-F	AP3 (2x)
+5V2	AP1 (6x)
+5V2	AP2 (1x)
+5V2-NF	AP1 (1x)
+5V2-NF	AP2 (1x)
+5V-SW	AP1 (6x)
+5V-SW	AP2 (1x)
+8V6	AP1 (3x)
+AUX	AP1 (2x)
+AUX	AP2 (1x)
+DC-F	AP1 (2x)
+DC-F	AP3 (2x)
+SUB-SPEAKER	AP5 (1x)
+SUB-SPEAKER	AP6 (2x)
-12-15V	AP1 (4x)
-12-15V	AP4 (6x)
-12-15V	AP5 (14x)
-12-15V	AP6 (6x)
-12-15V	AP7 (8x)
AL-OFF	AP1 (2x)
AUDIO-L	AP4 (1x)
AUDIO-L	AP5 (1x)
AUDIO-PROT	AP5 (3x)
AUDIO-R	AP4 (1x)
AUDIO-R	AP5 (1x)
AUDIO-SW	AP5 (1x)
AUDIO-SW	AP7 (1x)
BOOST	AP1 (2x)
CPROT	AP4 (2x)
CPROT	AP5 (1x)
CPROT-SW	AP5 (1x)
CPROT-SW	AP6 (2x)
-DC-F	AP1 (2x)
-DC-F	AP3 (2x)
DC-PROT	AP1 (1x)
DC-PROT	AP5 (2x)
DIM-CONTROL	AP1 (2x)
FEEDBACK+SW	AP6 (2x)
FEEDBACK-L	AP4 (2x)
FEEDBACK-R	AP4 (2x)
FEEDBACK-SW	AP6 (2x)
GND-AL	AP1 (2x)
GNDHA	AP1 (40x)
GNDHA	AP2 (20x)
GNDHA	AP3 (2x)
GNDHOT	AP3 (2x)
GND-L	AP1 (2x)
GND-L	AP4 (4x)
GND-L	AP5 (34x)
GND-LL	AP4 (7x)
GND-LL	AP5 (1x)
GND-LR	AP4 (7x)
GND-LR	AP5 (1x)
GND-LSW	AP5 (1x)
GND-LSW	AP6 (15x)
GND-S	AP1 (11x)
GND-SA	AP4 (8x)
GND-SA	AP5 (2x)
GND-SA	AP6 (8x)
GND-SA	AP7 (6x)
GNDscrew	AP3 (2x)
GNDscrew	AP5 (2x)
GND-SSB	AP5 (3x)
GND-SSP	AP1 (51x)
GND-SSP	AP2 (15x)
IN+SW	AP6 (2x)
IN-L	AP4 (2x)
IN-R	AP4 (2x)
IN-SW	AP6 (2x)
INV-MUTE	AP4 (1x)
INV-MUTE	AP5 (1x)
INV-MUTE	AP6 (1x)
LEFT-SPEAKER	AP4 (1x)
LEFT-SPEAKER	AP5 (1x)
MUTE	AP4 (2x)
MUTE	AP5 (1x)
MUTE	AP6 (2x)
ON-OFF	AP1 (3x)
OUT	AP6 (1x)
OUT	AP7 (2x)
OUTN	AP6 (1x)
OUTN	AP7 (1x)
POWER-GOOD	AP1 (2x)
POWER-OK-PLATFORM	AP1 (2x)
RIGHT-SPEAKER	AP4 (1x)
RIGHT-SPEAKER	AP5 (1x)
SOUND-ENABLE	AP5 (3x)
STANDBY	AP1 (5x)
STANDBY	AP2 (1x)
-SUB-SPEAKER	AP5 (1x)
-SUB-SPEAKER	AP6 (2x)
V-CLAMP	AP1 (1x)
V-CLAMP	AP3 (2x)
VN	AP4 (4x)

1.1. Introduction

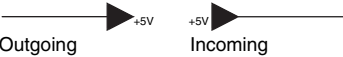
SRP (Service Reference Protocol) is a software tool that creates a list with all references to signal lines. The list contains references to the signals within all schematics of a PWB. It replaces the text references currently printed next to the signal names in the schematics. These printed references are created manually and are therefore not guaranteed to be 100% correct. In addition, in the current crowded schematics there is often none or very little place for these references. Some of the PWB schematics will use SRP while others will still use the manual references. Either there will be an SRP reference list for a schematic, or there will be printed references in the schematic.

1.2. Non-SRP Schematics

There are several different signals available in a schematic:

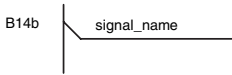
1.2.1. Power Supply Lines

All power supply lines are available in the supply line overview (see chapter 6). In the schematics (see chapter 7) is not indicated where supplies are coming from or going to. It is however indicated if a supply is incoming (created elsewhere), or outgoing (created or adapted in the current schematic).



1.2.2. Normal Signals

For normal signals, a schematic reference (e.g. B14b) is placed next to the signals.

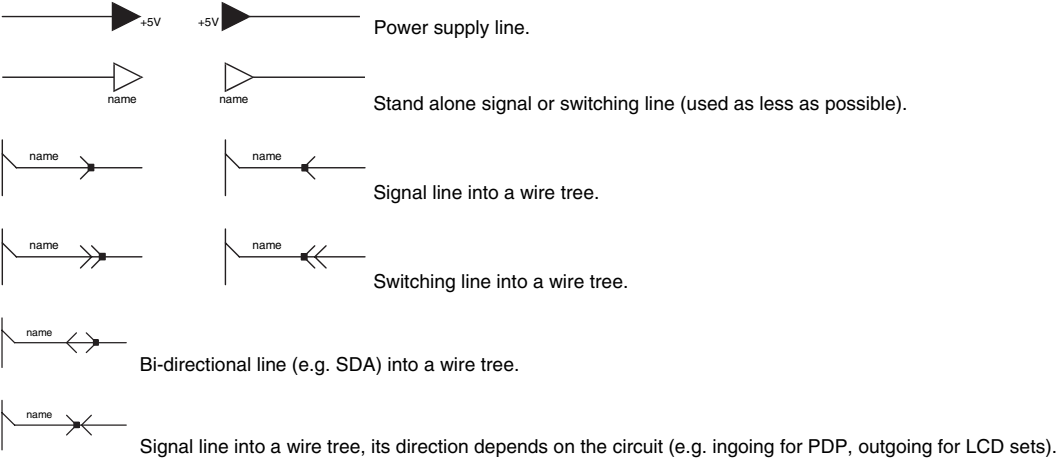


1.2.3. Grounds

For normal and special grounds (e.g. GNDHOT or GND3V3 etc.), nothing is indicated.

1.3. SRP Schematics

SRP is a tool, which automatically creates a list with signal references, indicating on which schematic the signals are used. A reference is created for all signals indicated with an SRP symbol, these symbols are:



Remarks:

- When there is a black dot on the "signal direction arrow" it is an SRP symbol, so there will be a reference to the signal name in the SRP list.
- All references to normal grounds (Ground symbols without additional text) are not listed in the reference list, this to keep it concise.
- Signals that are not used in multiple schematics, but only once or several times in the same schematic, are included in the SRP reference list, but only with one reference.

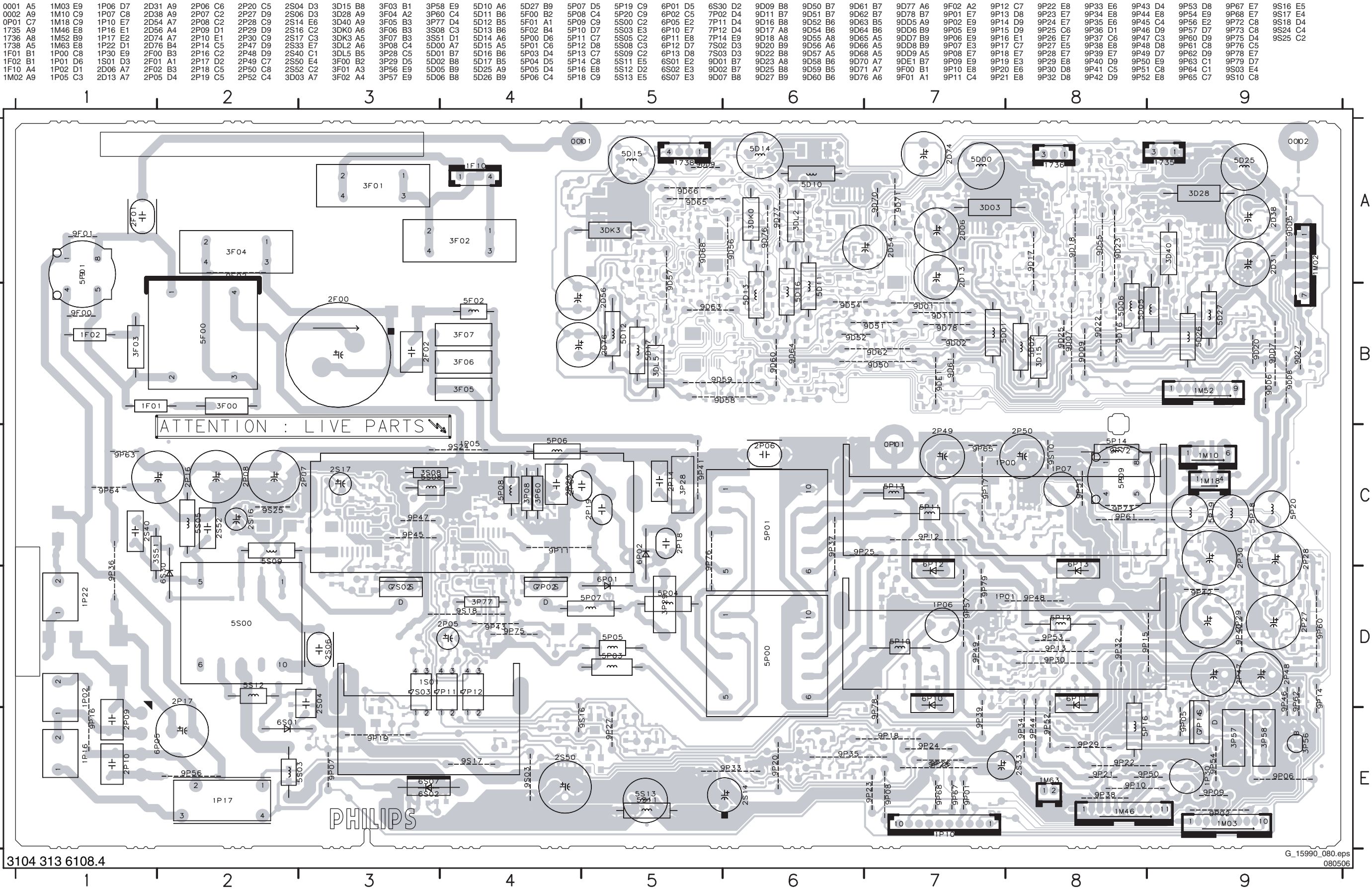
Additional Tip:

When using the PDF service manual file, you can very easily search for signal names and follow the signal over all the schematics. In Adobe PDF reader:

- Select the signal name you want to search for, with the "Select text" tool.
- Copy and paste the signal name in the "Search PDF" tool.
- Search for all occurrences of the signal name.
- Now you can quickly jump between the different occurrences and follow the signal over all schematics. It is advised to "zoom in" to e.g. 150% to see clearly, which text is selected. Then you can zoom out, to get an overview of the complete schematic.

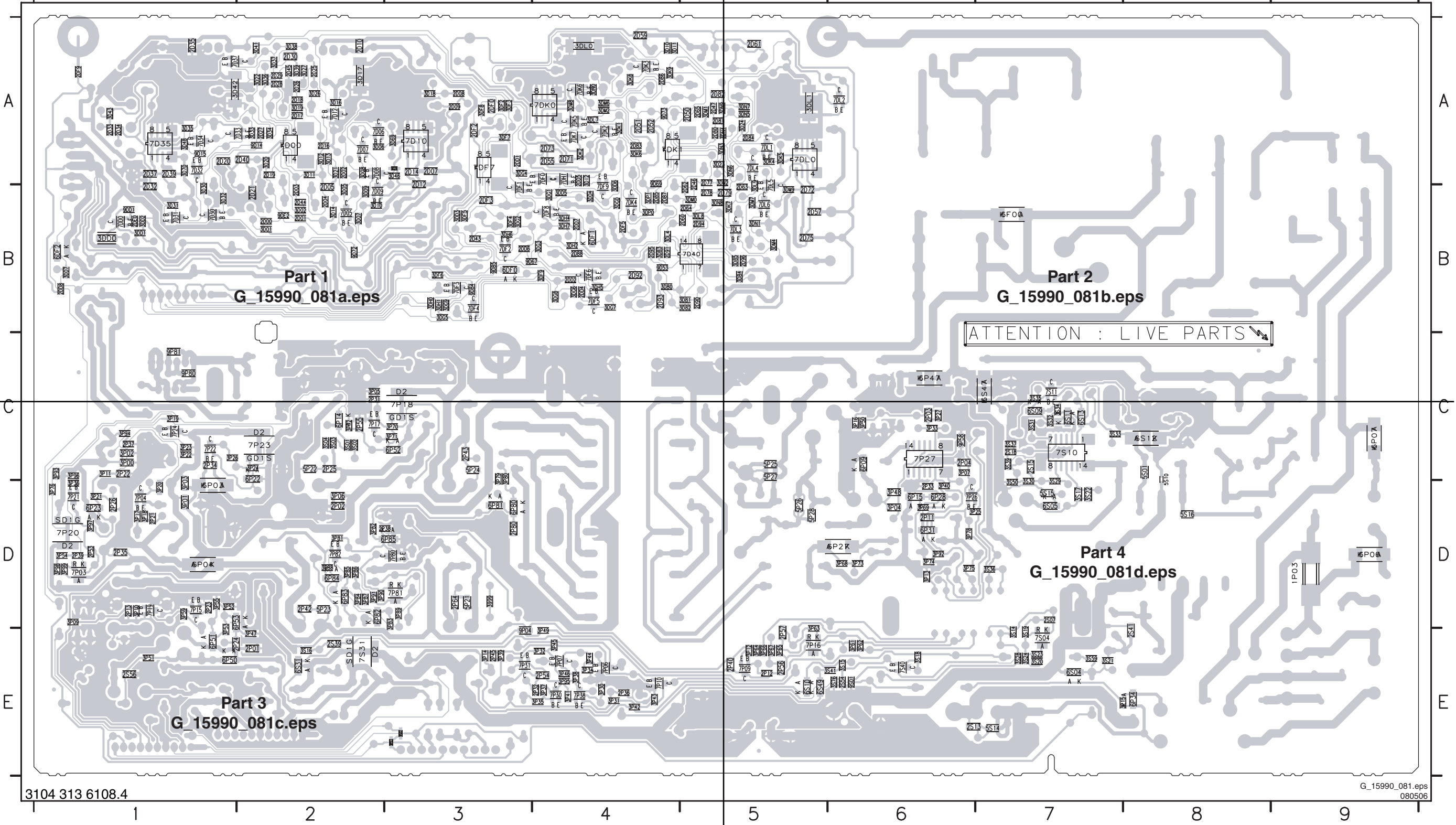
PS. It is recommended to use at least Adobe PDF (reader) version 6.x, due to better search possibilities in this version.

Layout Platform Supply 42" (Top Side)



Layout Platform Supply 42" (Overview Bottom Side)

1P03 D9	2D19 A2	2D43 B3	2D65 A5	2D88 B4	2DF0 A3	2P25 C2	2P54 E4	3D02 B2	3D21 A2	3D41 A2	3DD3 B3	3DG3 B4	3D12 A4	3DM1 A5	3DN9 A5	3P14 E3	3P32 E4	3P48 D6	3P68 D6	3P85 D2	3S02 C2	3S30 D7	5P24 C3	6P06 D9	6P80 D3	7D00 A2	7DD0 B1	7DK4 B4	7P10 E4	7P80 D3	9D84 B3
2D00 B2	2D20 A1	2D44 B2	2D71 A4	2D90 B5	2DF2 A3	2P26 D1	2P55 C2	3D05 B2	3D22 A2	3D42 A2	3DD4 B4	3DG4 A3	3DK1 A4	3DM2 A4	3DP0 B4	3P15 E7	3P33 C6	3P49 E4	3P69 D6	3P86 D2	3S03 C2	3S31 C7	5P25 C5	6P07 C9	6P81 D3	7D05 B2	7DF0 A4	7DK5 A4	7P15 D1	7P81 D3	9D85 B3
2D01 B2	2D21 B2	2D45 A2	2D72 B5	2D91 B4	2DF3 B3	2P31 C2	2P56 E5	3D06 A2	3D23 A5	3D43 A1	3DD5 B4	3DG5 B3	3DK2 A4	3DM4 B5	3DP1 B4	3P16 C6	3P34 E4	3P50 C6	3P70 C3	3P87 D2	3S04 C2	3S32 C7	5P26 D5	6P09 C6	6P82 D2	7D06 A2	7DF1 B3	7DK6 A4	7P16 E5	7P82 D2	9DD1 B1
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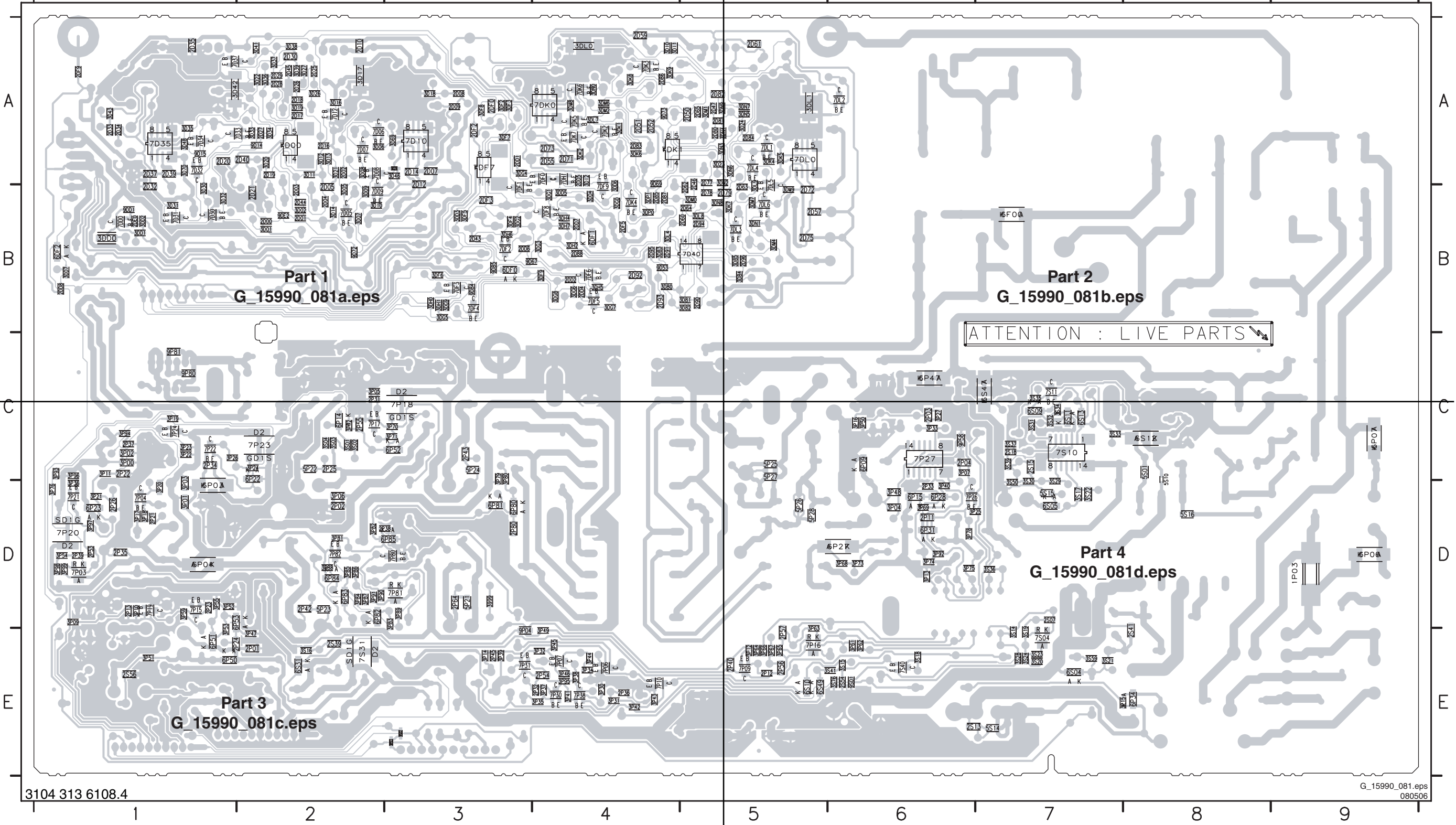


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Layout Platform Supply 42" (Part 1 Bottom Side)

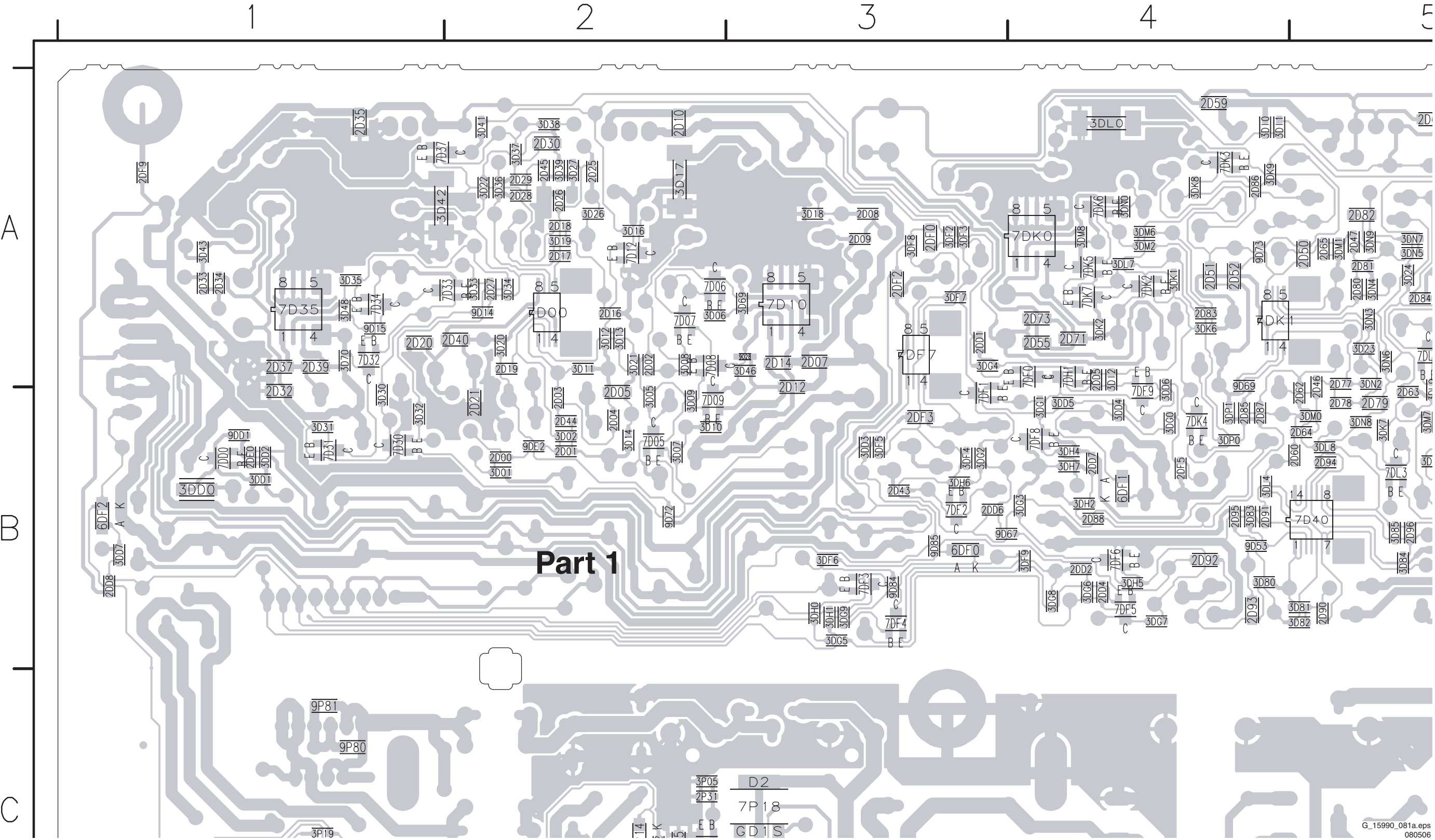
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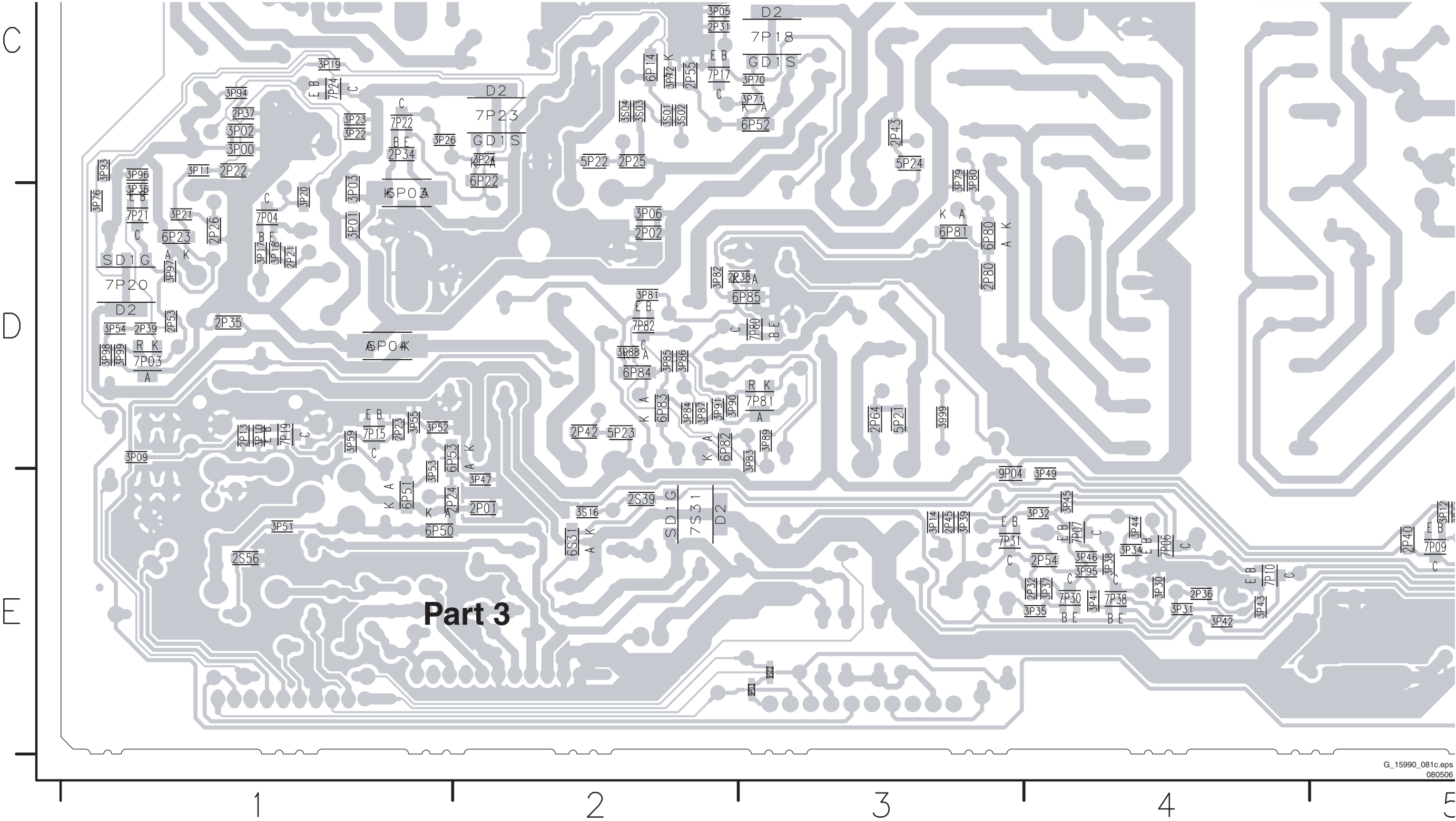
Layout Platform Supply 42" (Part 1 Bottom Side)



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Layout Platform Supply 42" (Part 3 Bottom Side)



Layout Platform Supply 42" (Part 4 Bottom Side)

Part 4

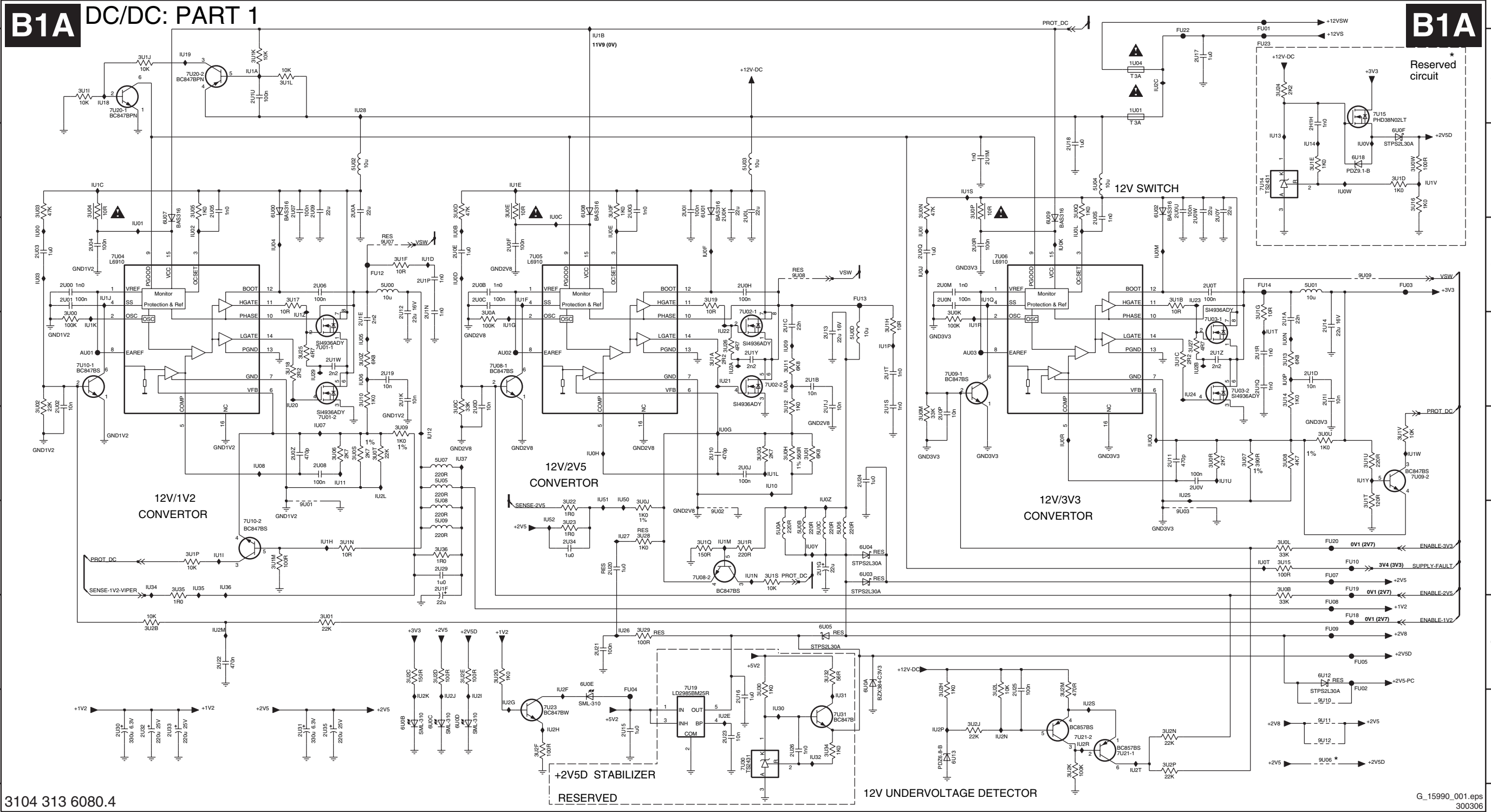
C

D

E

SSB: DC/DC Part 1

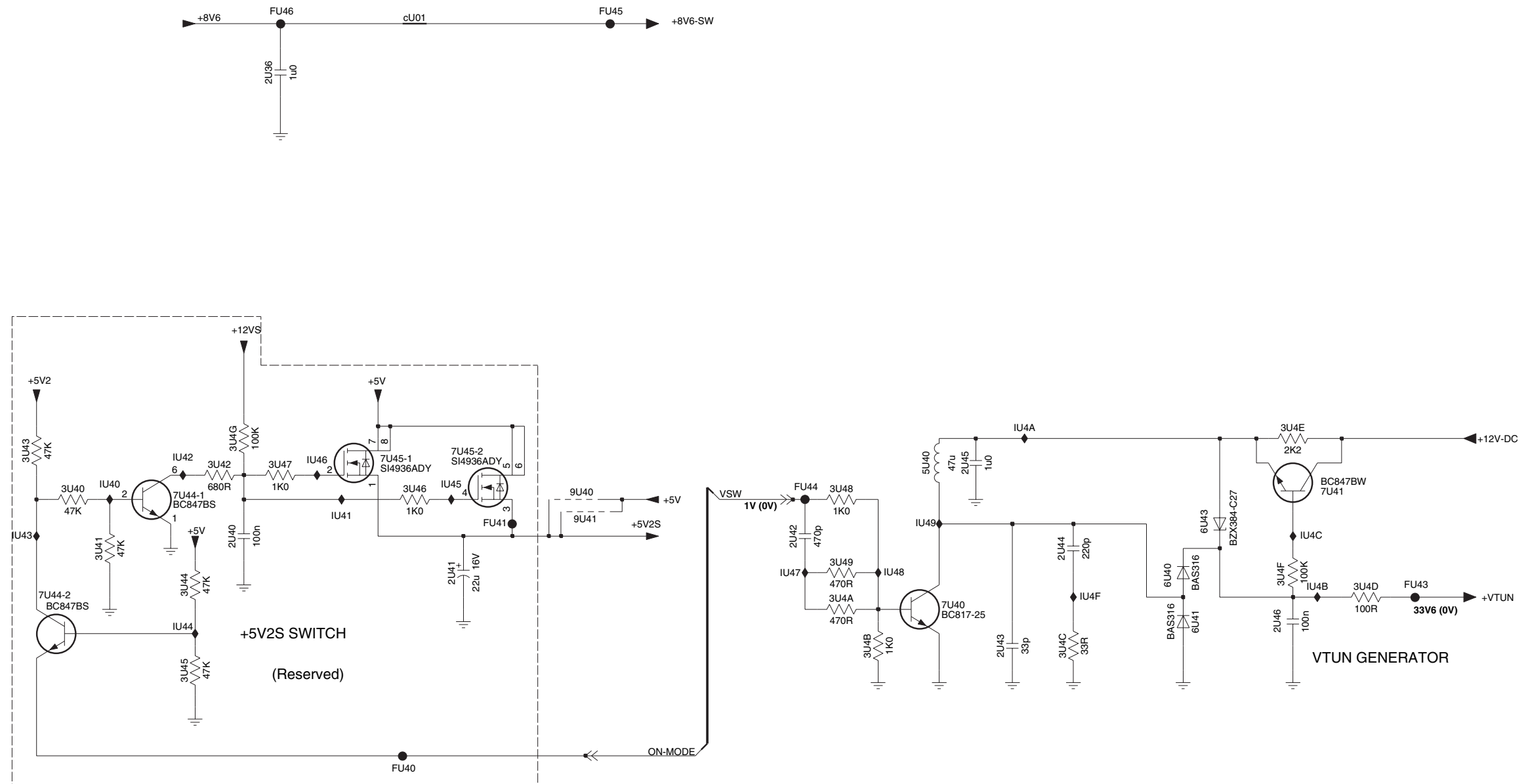
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2U07 B3	2U0L B8	2U11 E13	2U1F F5	2U1Y D8	2U34 F6	3U0C E5	3U0R E13	3U18 D3	3U1M F3	3U27 D13	3U2N H13	5U07 E5	6U08 B6	7U02-2 D8	7U19 H7	9U09 C15	FU09 G14	IU04 C3	IU0I C10	IU1H F4	IU1W E15	IU2B D13	IU2S H12		
2U08 E4	2U0M C10	2U12 D4	2U1G F9	2U1Z D13	2U35 H4	3U0D B5	3U0S E4	3U19 C8	3U1N F4	3U28 F7	3U2P H13	5U08 F5	6U09 C11	7U03-1 D13	7U20-1 A1	9U10 H14	FU10 F14	IU05 D4	IU0J C10	IU1I F2	IU1Y E15	IU2C A12	IU2T H12		
2U09 B3	2U0N C10	2U13 D9	2U1I D14	2U20 F7	3U00 D1	3U0E B6	3U0T E4	3U1A D8	3U1P F2	3U29 G7	3U30 H8	5U09 F5	6U0A G9	7U03-2 D13	7U20-2 A2	9U11 H14	FU12 C4	IU06 D4	IU0K C11	IU1J C1	IU1Z D3	IU2E H8	IU30 H8		
2U0A B4	2U0P E10	2U14 D14	2U1J E9	2U21 G6	3U01 G4	3U0F B7	3U0U E14	3U1B C13	3U1Q F8	3U2B G2	3U32 G9	5U0A F8	6U0B H4	7U04 C1	7U21-1 H12	9U12 H14	FU13 C9	IU07 E4	IU0L C12	IU13 B14	IU1K D1	IU2D D3	IU2F G6	IU31 H9	



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B1B DC/DC: PART 2



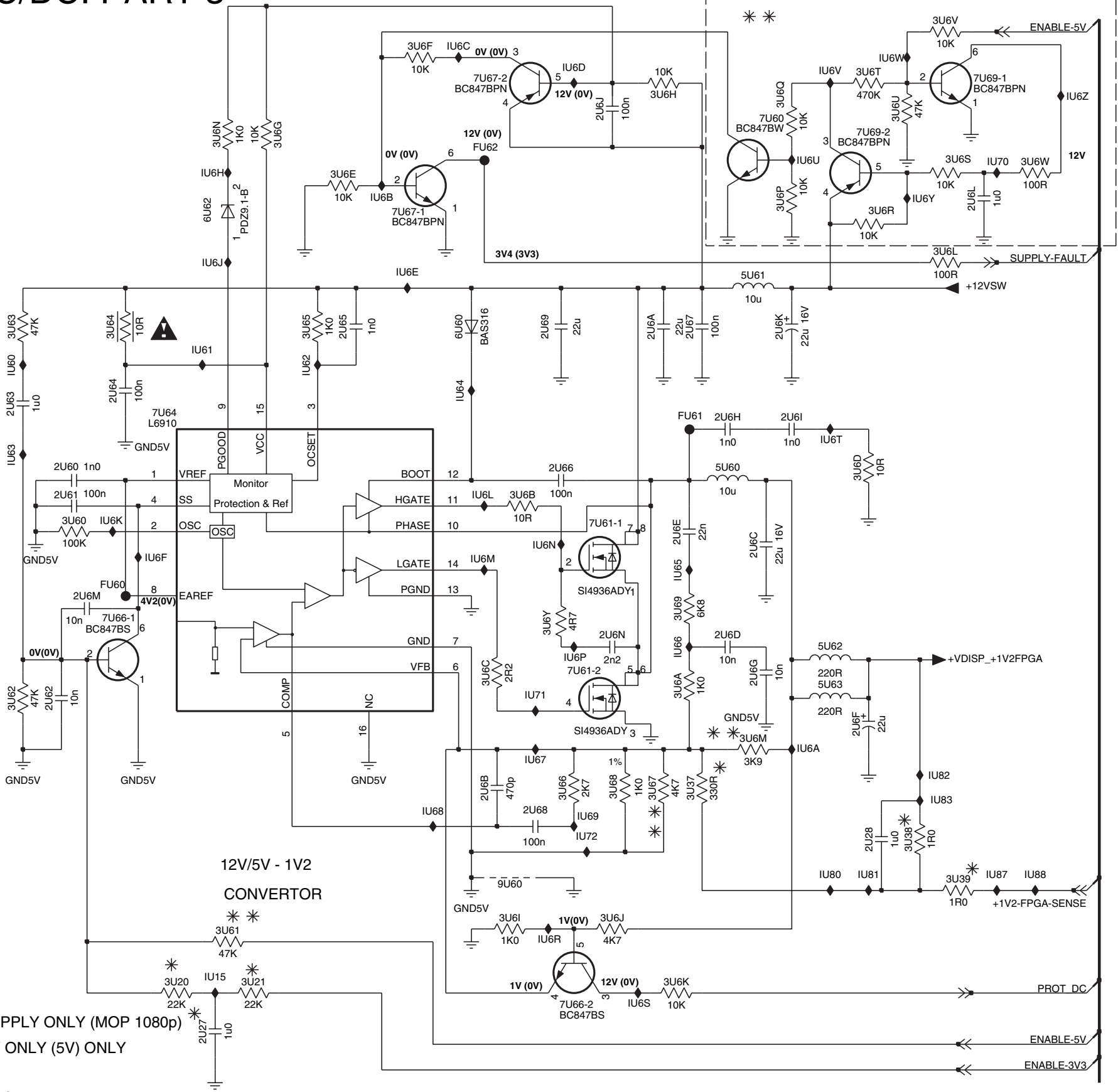
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300306

2U36 A2
2U40 D2
2U41 D4
2U42 D6
2U43 E7
2U44 D7
2U45 D7
2U46 E8
3U40 D1
3U41 D1
3U42 D2
3U43 D1
3U44 D2
3U45 E2
3U46 D3
3U47 D3
3U48 D6
3U49 D6
3U4A D6
3U4B E6
3U4C E7
3U4D D9
3U4E C8
3U4F D8
3U4G C2
5U40 D6
6U40 D8
6U41 E8
6U43 D8
7U40 D6
7U41 D9
7U44-1 D2
7U44-2 D1
7U45-1 D3
7U45-2 D4
9U40 D4
9U41 D4
FU40 E3
FU41 D4
FU43 D9
FU44 D6
FU45 A4
FU46 A3
IU40 D2
IU41 D3
IU42 D2
IU43 D1
IU44 E2
IU45 D4
IU46 D3
IU47 D6
IU48 D6
IU49 D6
IU4A C7
IU4B D9
IU4C D9
IU4F D7
cU01 A3

SSB: DC/DC Part 3

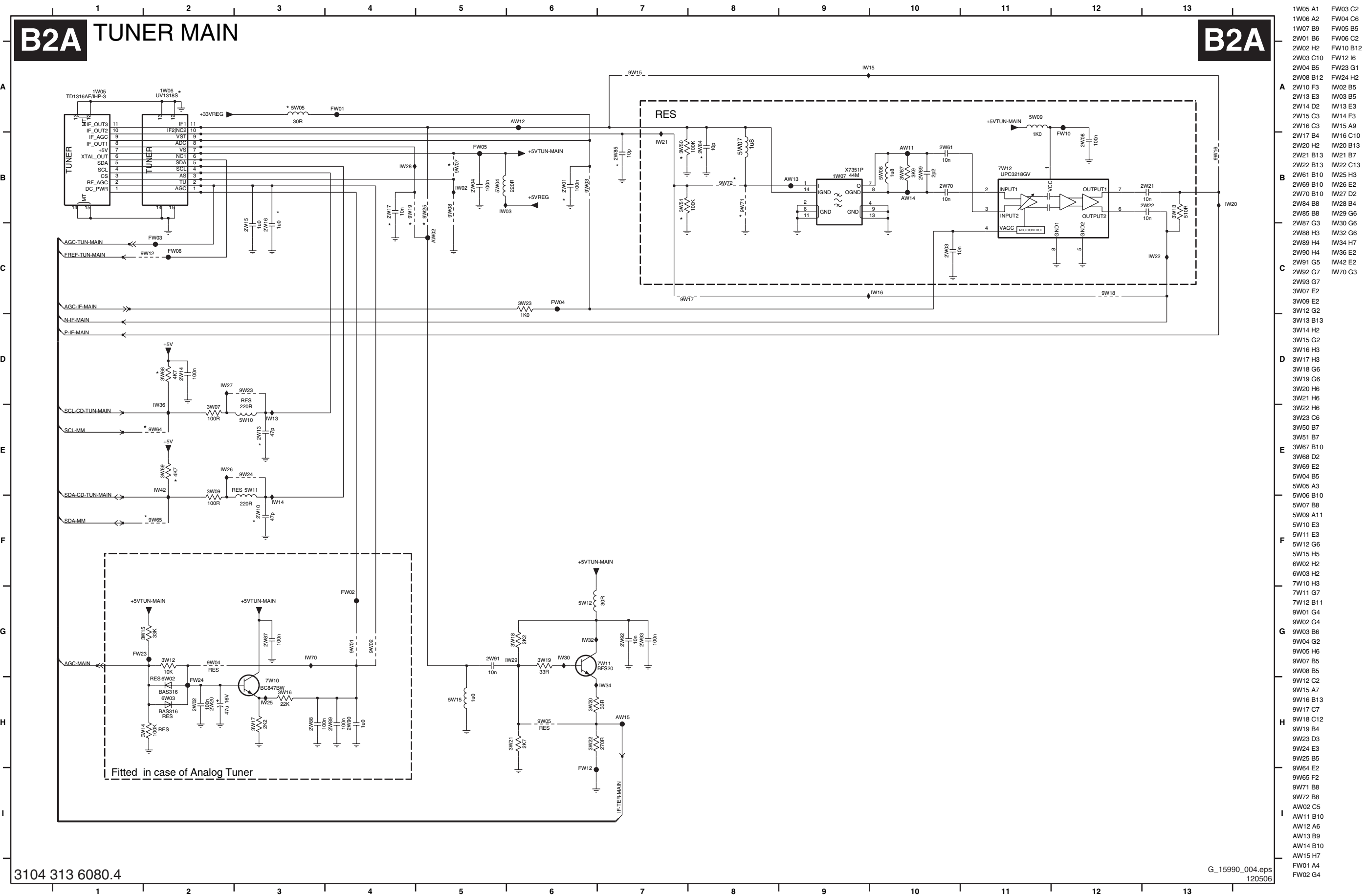
B1C DC/DC: PART 3

B1C



2U27 F2	7U67-2 A4
2U28 E6	7U69-1 A7
2U60 C2	7U69-2 A6
2U61 C2	9U60 E4
2U62 D2	FU60 D2
2U63 C1	FU61 C5
2U64 C2	FU62 A4
2U65 B3	IU15 F3
2U66 C4	IU60 C1
2U67 B5	IU61 B2
2U68 E4	IU62 C3
2U69 B4	IU63 C1
2U6A B5	IU64 C4
2U6B E4	IU65 D5
2U6C D6	IU66 D5
2U6D D5	IU67 E4
2U6E C5	IU68 E4
2U6F E6	IU69 E5
2U6G D6	IU6A E6
2U6H C5	IU6B B3
2U6I C6	IU6C A4
2U6J A5	IU6D A5
2U6K B6	IU6E B4
2U6L B7	IU6F D2
2U6M D2	IU6H A3
2U6N D5	IU6J B3
3U20 F2	IU6K C2
3U21 F3	IU6L C4
3U37 E5	IU6M D4
3U38 E6	IU6N D4
3U39 E7	IU6P D5
3U60 C2	IU6R F4
3U61 F3	IU6S F5
3U62 D1	IU6T C6
3U63 B1	IU6U A6
3U64 B2	IU6V A6
3U65 B3	IU6W A6
3U66 E4	IU6Y B6
3U67 E5	IU6Z A7
3U68 E5	IU70 A7
3U69 D5	IU71 D4
3U6A D5	IU72 E5
3U6B C4	IU80 E6
3U6C D4	IU81 E6
3U6D C6	IU82 E7
3U6E A3	IU83 E7
3U6F A4	IU87 E7
3U6G A3	IU88 E7
3U6H A5	
3U6I F4	
3U6J F5	
3U6K F5	
3U6L B7	
3U6M E6	
3U6N A3	
3U6P B6	
3U6Q A6	
3U6R B6	
3U6S A7	
3U6T A6	
3U6U A6	
3U6V A7	
3U6W A7	
3U6Y D4	
5U60 C5	
5U61 B6	
5U62 D6	
5U63 D6	
6U60 B4	
6U62 B2	
7U60 A6	
7U61-1 C5	
7U61-2 D5	
7U64 C2	
7U66-1 D2	
7U66-2 F4	
7U67-1 B4	

SSB: Tuner Main

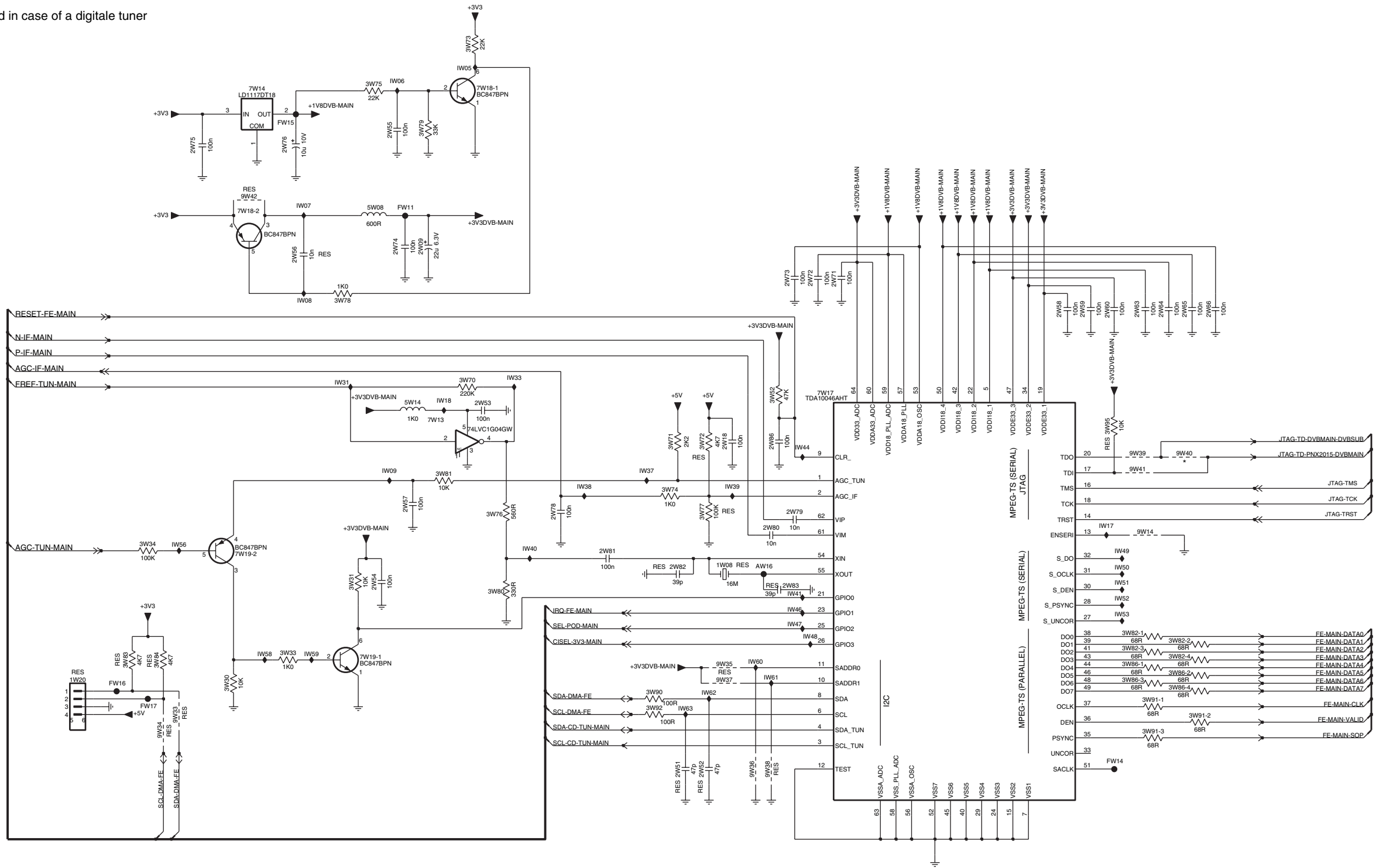


SSB: Tuner Main Channel Decoder

B2B TUNER MAIN: CHANNEL DECODER

B2B

used in case of a digitale tuner



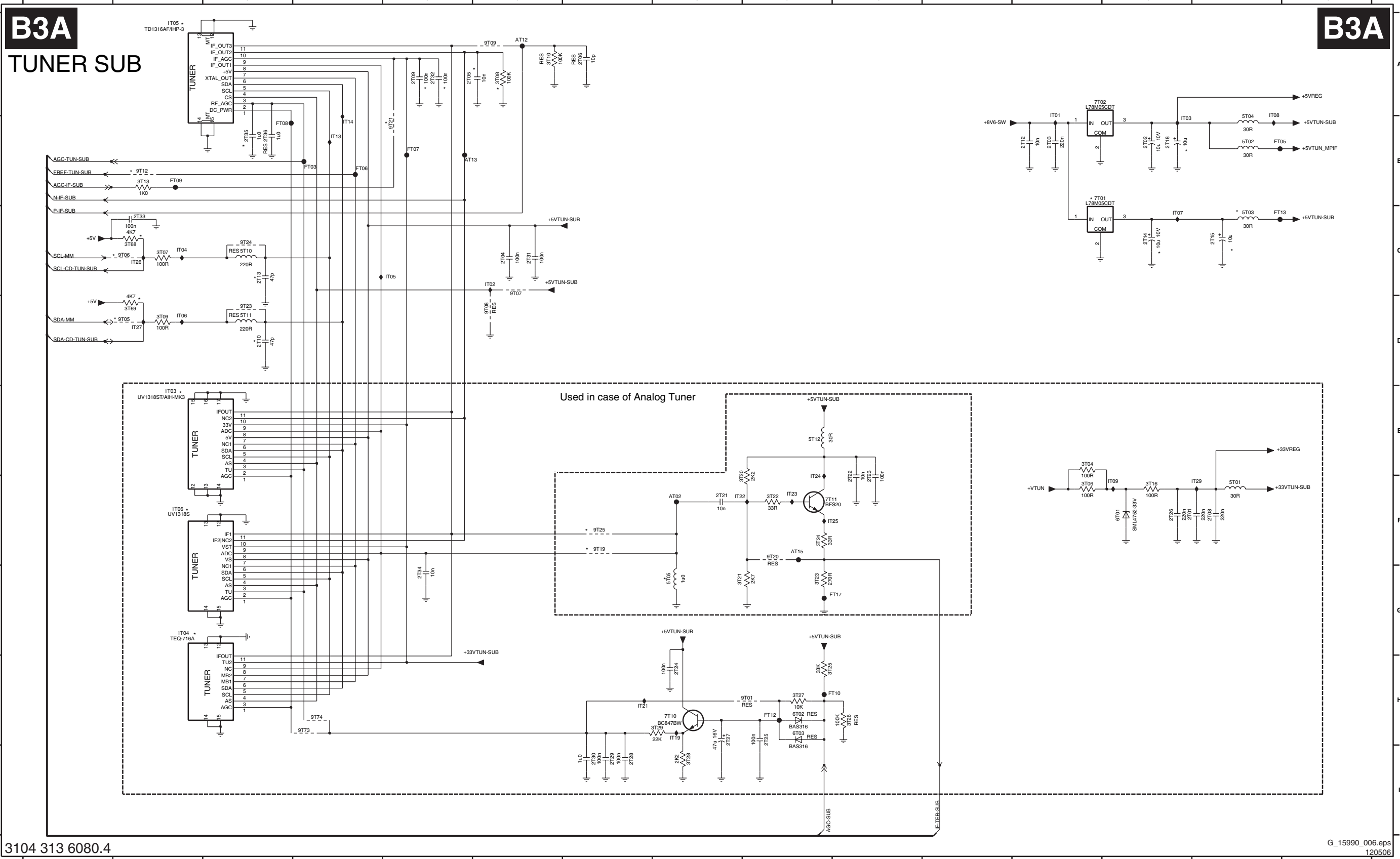
3104 313 6080.4

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300306

- 1W08 F8
- 1W20 G2
- 2W09 C5
- 2W18 E8
- 2W51 H7
- 2W52 H8
- 2W53 D6
- 2W54 F5
- 2W55 B5
- 2W56 C4
- 2W57 E5
- 2W58 D11
- 2W59 D11
- 2W60 D11
- 2W63 D12
- 2W64 D12
- 2W65 D12
- 2W66 D12
- 2W71 C9
- 2W72 C9
- 2W73 C8
- 2W74 C5
- 2W75 B3
- 2W76 B4
- 2W78 E6
- 2W79 E8
- 2W80 F8
- 2W81 F7
- 2W82 F7
- 2W83 F8
- 2W86 E8
- 3W30 G3
- 3W31 F4
- 3W33 G4
- 3W34 F2
- 3W52 D8
- 3W70 D5
- 3W71 E7
- 3W72 E8
- 3W73 A5
- 3W74 E7
- 3W75 A5
- 3W76 E6
- 3W77 E8
- 3W78 C4
- 3W79 B5
- 3W80 F6
- 3W81 E5
- 3W82-1 G11
- 3W82-2 G12
- 3W82-3 G11
- 3W82-4 G12
- 3W83 G2
- 3W84 G3
- 3W86-1 G11
- 3W86-2 G12
- 3W86-3 G11
- 3W86-4 G12
- 3W90 G7
- 3W91-1 G12
- 3W91-2 G12
- 3W91-3 G12
- 3W92 G7
- 3W95 E11
- 5W08 C5
- 5W14 D5
- 7W15 E5
- 7W14 B3
- 7W17 D9
- 7W18-1 B5
- 7W18-2 C3
- 7W19-1 G4
- 7W19-2 F3
- 9W14 F12
- 9W33 G3
- 9W34 G3
- 9W35 G8
- 9W36 H8
- 9W37 G8
- 9W38 H8
- 9W39 E12
- 9W40 E12
- 9W41 E12
- 9W42 C3
- AW16 F8
- FW11 C5
- FW14 H11
- FW15 B4
- FW16 G2
- FW17 G2
- IW05 A5
- IW06 A5
- IW07 C4
- IW08 C4
- IW09 E5
- IW17 F11
- IW18 D5
- IW31 D4
- IW33 D6
- IW37 E7
- IW38 E6
- IW39 E8
- IW40 F6
- IW41 F8
- IW44 E8
- IW46 F8
- IW47 F8

SSB: Tuner Sub

1T03 E2	2T01 F13	2T05 A5	2T10 D3	2T15 C14	2T23 F10	2T27 H8	2T31 C6	2T35 B3	3T07 C2	3T13 B2	3T22 F9	3T26 H10	3T68 C2	5T03 C14	5T11 D3	6T03 H9	7T11 F9	9T07 C6	9T19 F7	9T24 C3	AT02 F8	FT03 B4	FT08 B3	FT13 C14	IT03 B13	IT07 C13	IT14 B4	IT23 F9	IT27 D2
1T04 G2	2T02 B13	2T06 A7	2T12 B12	2T18 B13	2T24 H8	2T28 I7	2T32 A5	2T36 B3	3T08 A6	3T16 F13	3T23 G9	3T27 H9	3T69 D2	5T04 B14	5T12 E9	7T01 B12	9T01 H9	9T08 D6	9T20 F9	9T25 F7	AT12 A6	FT05 B14	FT09 B2	FT17 G10	IT04 C2	IT08 A14	IT19 H8	IT24 F9	IT29 F14
1T05 A2	2T03 B12	2T08 F14	2T13 C3	2T21 F8	2T25 H9	2T29 I7	2T33 C2	3T04 E12	3T09 D2	3T20 F9	3T24 F8	3T28 I8	5T01 F14	5T05 G8	6T01 F13	7T02 A12	9T05 D2	9T09 A6	9T21 B5	9T23 D3	AT13 B5	FT06 B4	FT10 H10	IT01 A12	IT05 C5	IT09 F13	IT21 H7	IT25 F10	
1T06 F2	2T04 C6	2T09 A5	2T14 C13	2T22 F10	2T26 F13	2T30 I7	2T34 G5	3T06 F12	3T10 A6	3T21 G8	3T25 H9	3T29 H8	5T02 B14	5T10 C3	6T02 H9	7T10 H8	9T06 C2	9T12 B2	9T23 D3	9T74 H4	AT15 F9	FT07 B5	FT12 H9	IT02 C6	IT06 D2	IT13 B4	IT22 F8	IT26 C2	



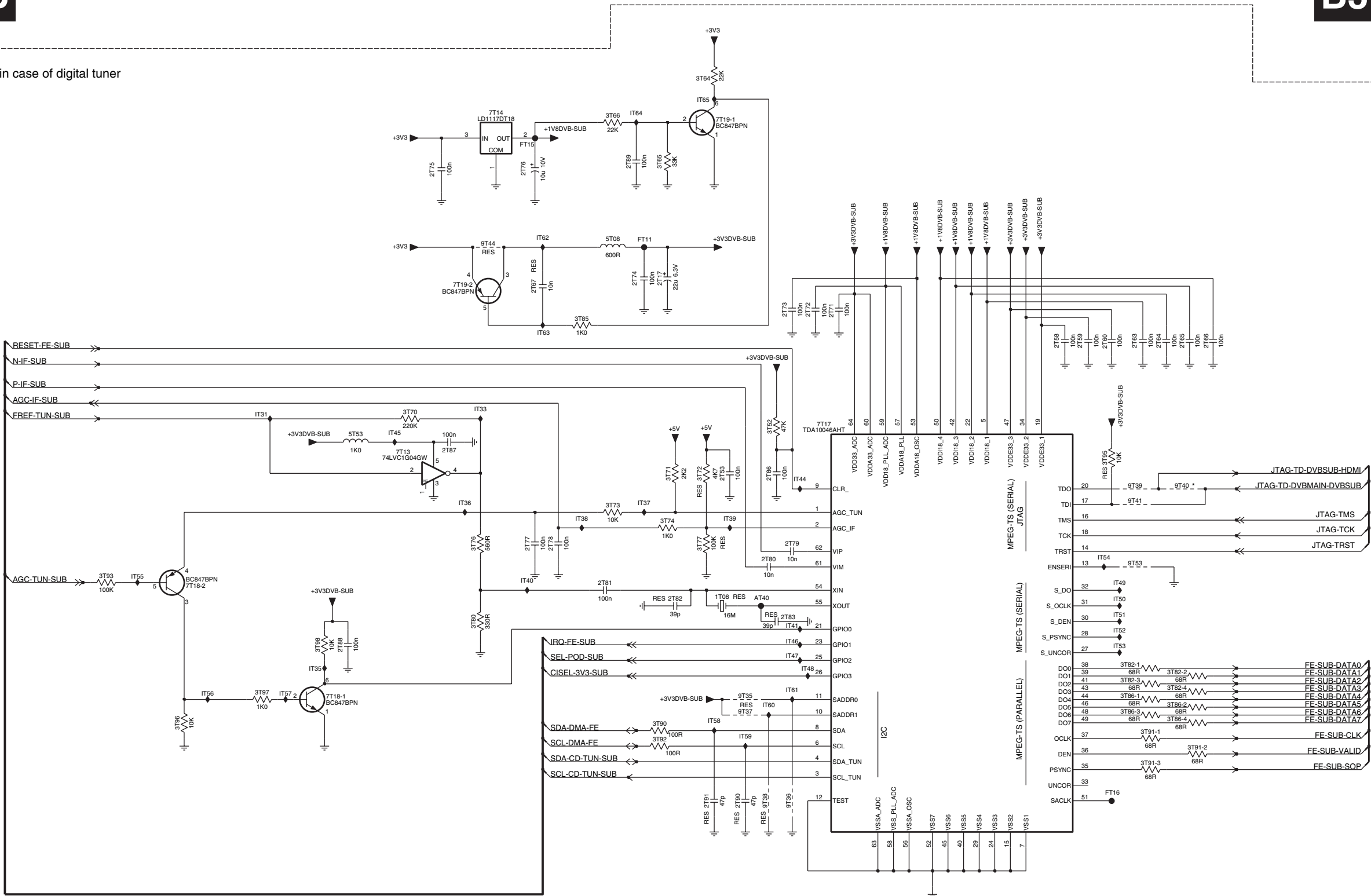
3104 313 6080.4

SSB: Tuner Sub Channel Decoder

B3B TUNER SUB: CHANNEL DECODER

B3B

Used in case of digital tuner



3104 313 6080.4

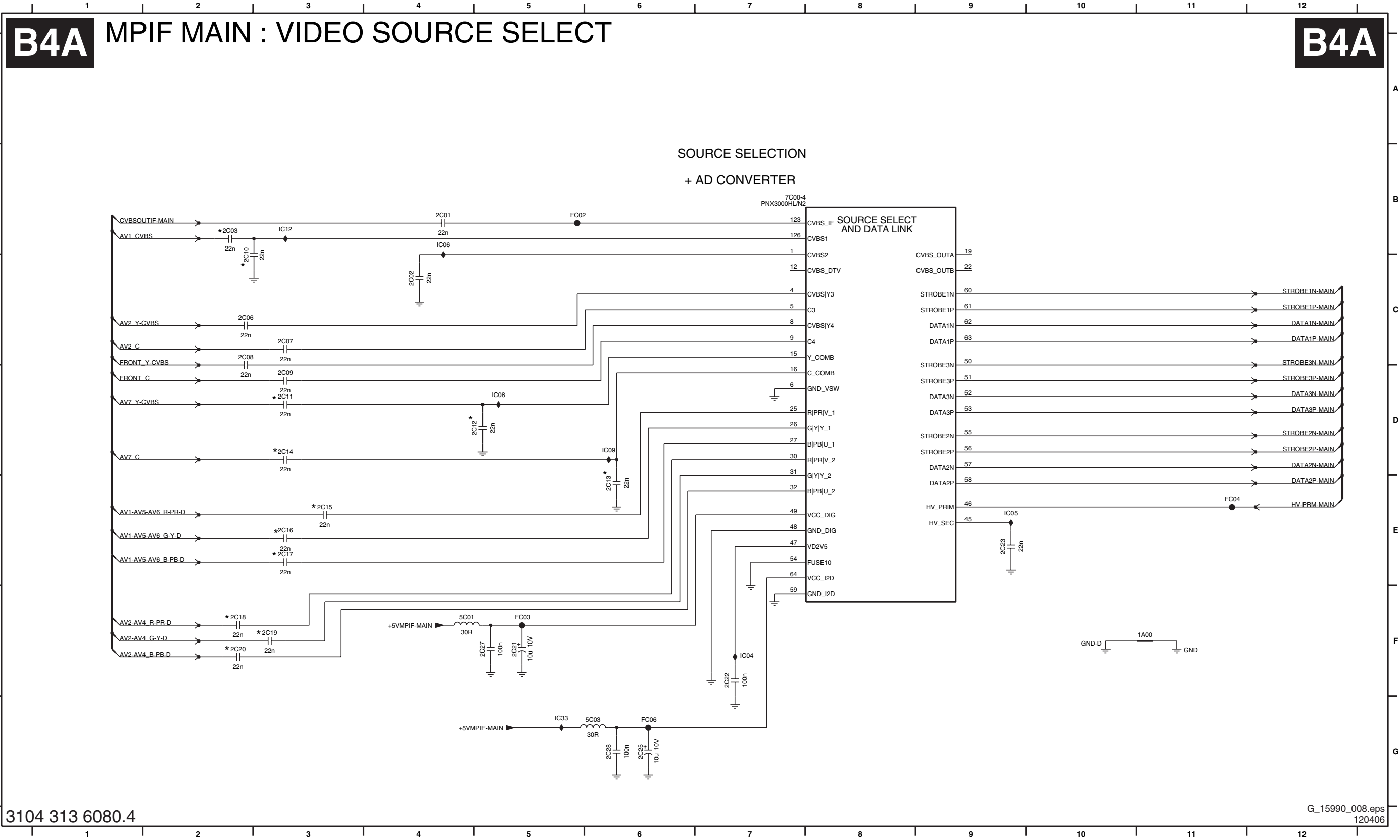
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1T08 F8
2T17 C7
2T53 E8
2T58 D11
2T59 D11
2T60 D11
2T63 D11
2T64 D12
2T65 D12
2T66 D12
2T67 C6
2T71 D9
2T72 D8
2T73 D8
2T74 C7
2T75 B5
2T76 B6
2T77 F6
2T78 F6
2T79 F8
2T80 F8
2T81 F6
2T82 F7
2T83 F8
2T86 E8
2T87 E5
2T88 G4
2T89 B7
2T90 H8
2T91 H7
3T53 G8
3T64 A7
3T65 B7
3T66 B7
3T70 E5
3T71 E7
3T72 E7
3T73 E7
3T74 F7
3T76 F5
3T77 F5
3T80 F5
3T82-1 G11
3T82-2 G12
3T82-3 G11
3T82-4 G12
3T85 D6
3T86-1 G11
3T86-2 G12
3T86-3 G11
3T86-4 G12
3T90 G7
3T91-1 G11
3T91-2 H12
3T91-3 H11
3T92 H7
3T93 F2
3T95 E11
3T96 G3
3T97 G3
3T98 G4
5T08 C7
5T53 E4
7T13 E5
7T14 B5
7T17 E9
7T18-1 G4
7T18-2 F3
7T19-1 B7
7T19-2 C5
9T35 G8
9T36 H8
9T37 G8
9T38 H8
9T39 E11
9T40 E12
9T41 E11
9T44 C5
9T53 F11
AT40 F8
FT11 C7
FT15 B6
FT16 H11
IT31 E3
IT33 D5
IT35 G4
IT36 E5
IT37 E7
IT38 E6
IT39 F6
IT40 F6
IT41 F8
IT44 E8
IT45 E5
IT46 G8
IT47 G8
IT48 G8
IT49 F11
IT50 F11
IT51 F11
IT52 F11
IT53 G11
IT54 F11
IT55 F2
IT56 G3
IT57 G4
IT58 G7
IT59 G8
IT60 G8

IT61 G8
IT62 C6
IT63 D6
IT64 B7
IT65 B7

SSB: MPIF Main: Video Source Select

1A00 F11 2C02 C4 2C06 C2 2C08 C2 2C10 C2 2C12 D5 2C14 D3 2C16 E3 2C18 F2 2C20 F2 2C22 F7 2C25 G6 2C28 G6 5C03 G6 FC02 B5 FC04 E11 IC04 F7 IC06 B4 IC09 D6 IC33 G5
2C01 B4 2C03 B2 2C07 C3 2C09 D3 2C11 D3 2C13 E6 2C15 E3 2C17 E3 2C19 F3 2C21 F5 2C23 E9 2C27 F5 5C01 F4 FC03 F5 FC06 G6 IC05 E9 IC08 D5 IC12 B3

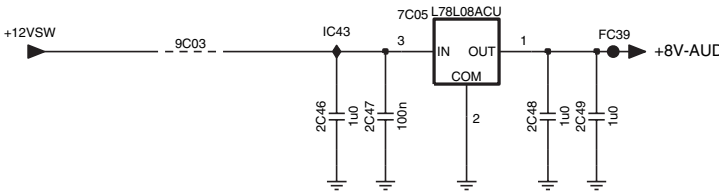
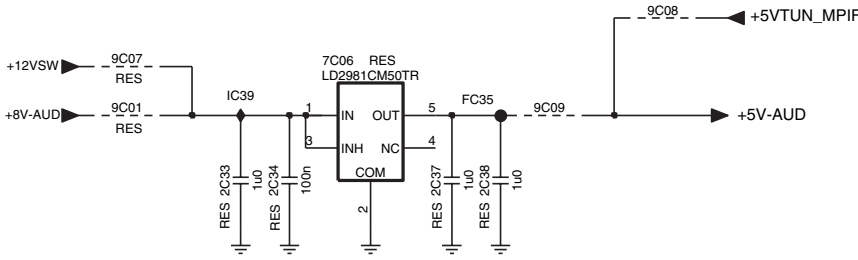
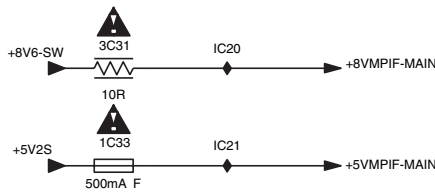


SSB: MPIF Main: Supply & Control

B4B

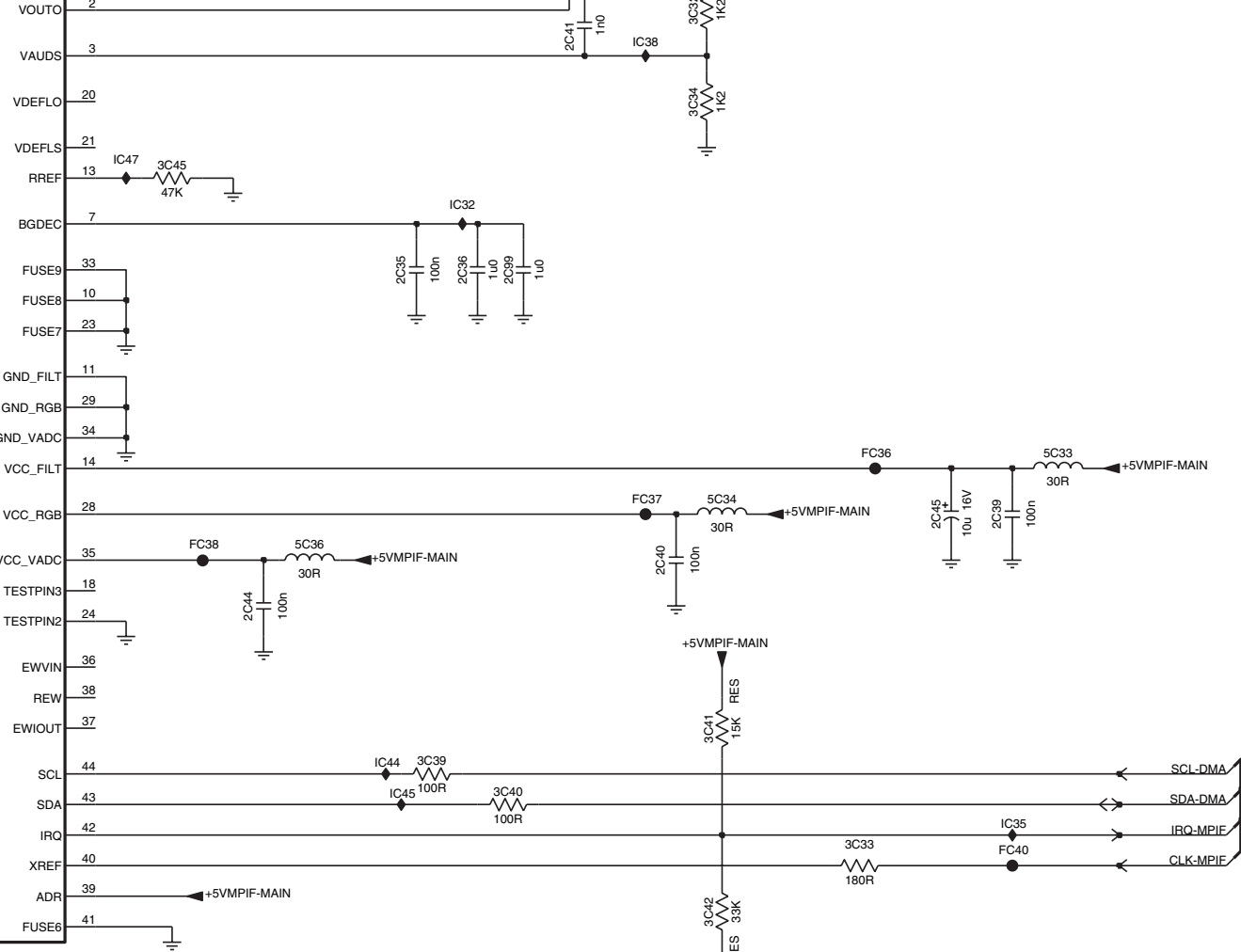
MPIF MAIN: SUPPLY + CONTROL

B4B



7C00-3
PNX3000HL/N2

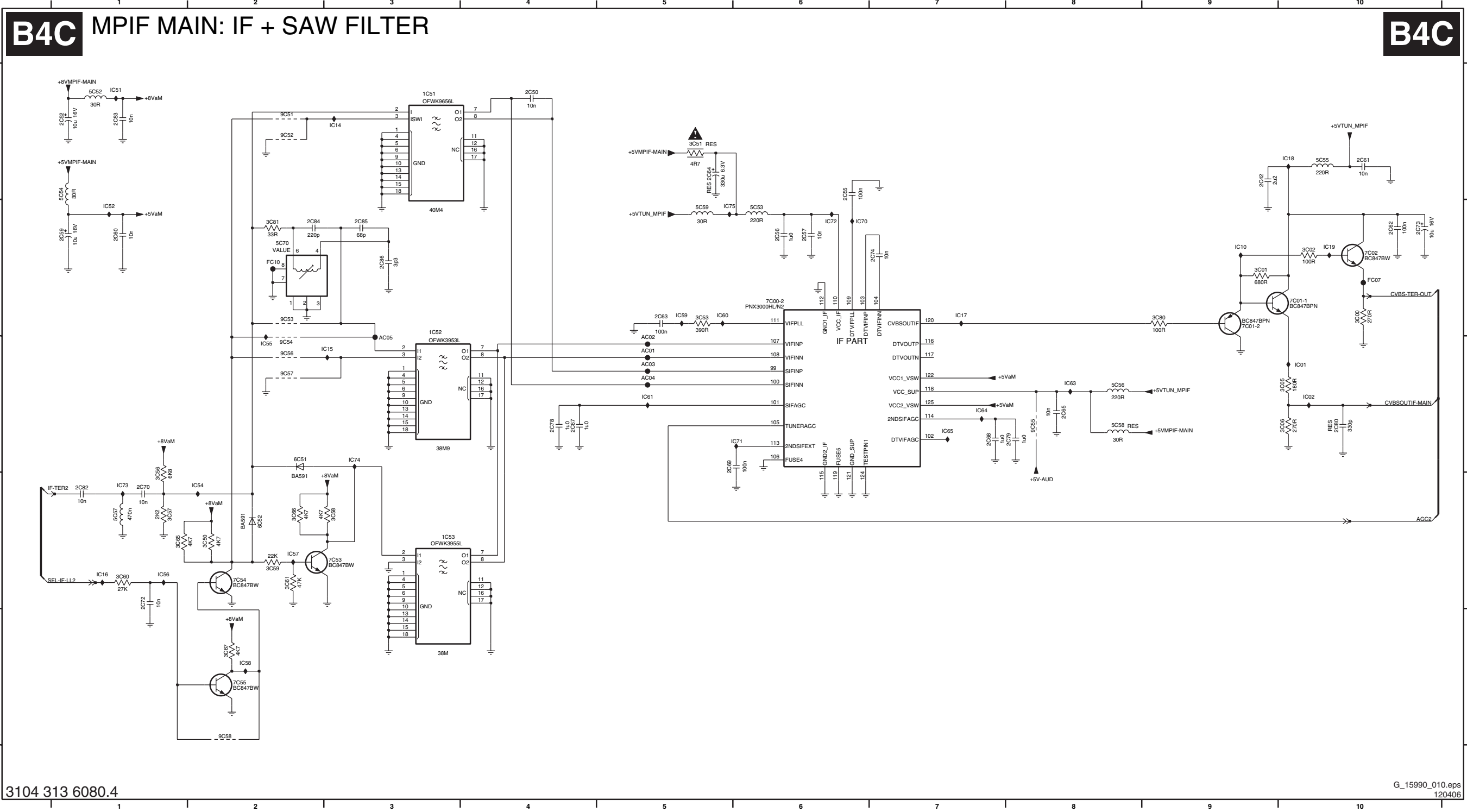
MPIF-SUPPLY
E/W & CONTROL



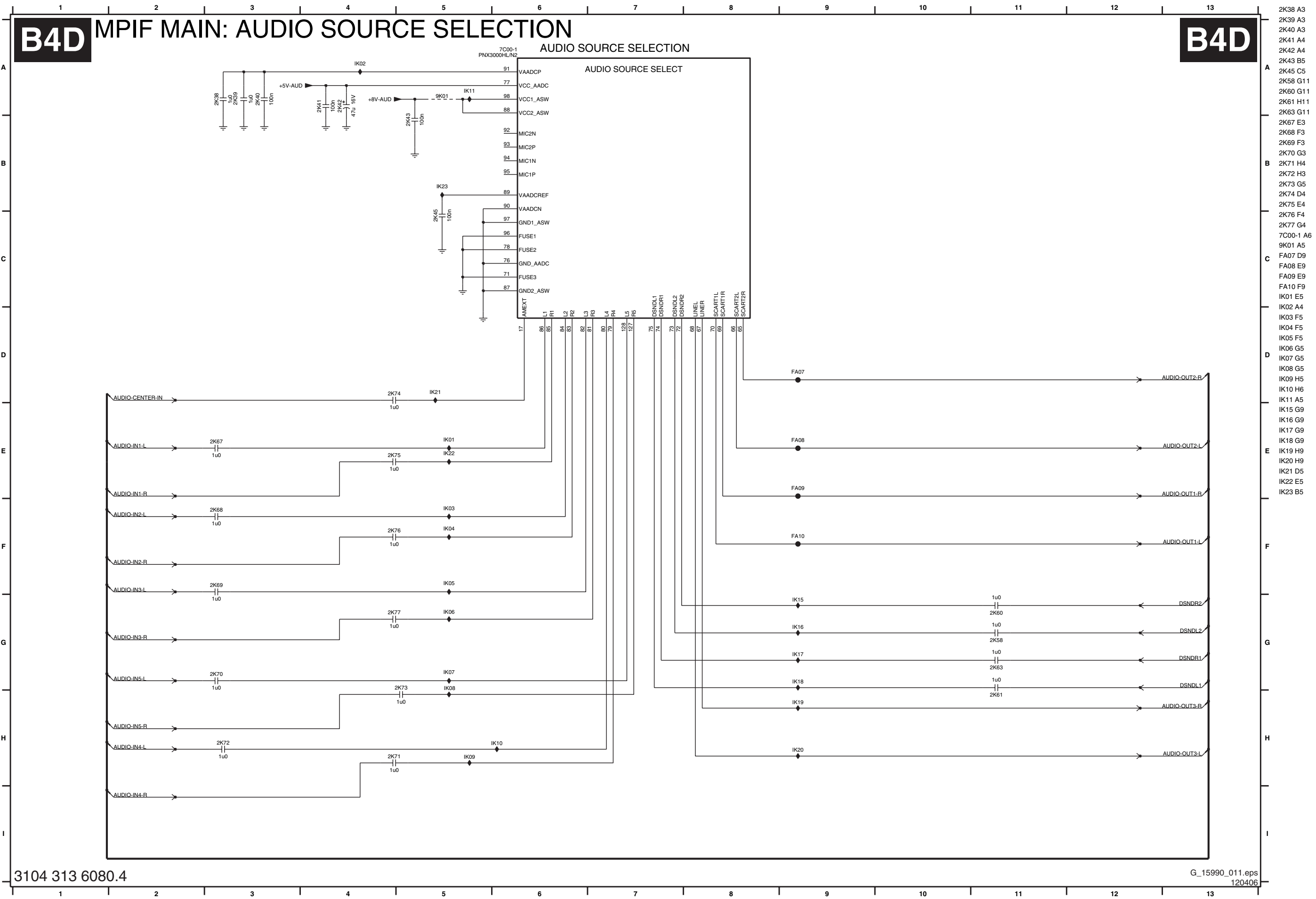
- 1C33 B1
- 2C31 A9
- 2C32 B10
- 2C33 E2
- 2C34 E2
- 2C35 C7
- 2C36 C8
- 2C37 E3
- 2C38 E3
- 2C39 D10
- 2C40 E9
- 2C41 B8
- 2C44 E7
- 2C45 D10
- 2C46 F2
- 2C47 F2
- 2C48 F3
- 2C49 F3
- 2C99 C8
- 3C30 B9
- 3C31 A1
- 3C32 B9
- 3C33 F9
- 3C34 C9
- 3C39 F7
- 3C40 F8
- 3C41 E9
- 3C42 F9
- 3C45 C6
- 5C31 A10
- 5C33 D10
- 5C34 D9
- 5C36 E7
- 7C00-3 B5
- 7C05 F2
- 7C06 D2
- 7C31 A9
- 9C01 D2
- 9C03 F1
- 9C07 D2
- 9C08 D4
- 9C09 D3
- FC31 A9
- FC32 B10
- FC35 D3
- FC36 D10
- FC37 D8
- FC38 E6
- FC39 F3
- FC40 F10
- IC20 A2
- IC21 B2
- IC32 C8
- IC35 F10
- IC36 A8
- IC37 B9
- IC38 B8
- IC39 D2
- IC43 F2
- IC44 F7
- IC45 F7
- IC47 C6

SSB: MPIF Main: IF & SAW Filter

1C51 A3	2C50 A4	2C56 B6	2C61 A10	2C65 C8	2C70 D1	2C78 C4	2C84 B2	3C01 B9	3C50 D2	3C57 D1	3C61 D2	3C80 B9	5C54 A1	5C58 C8	6C52 D2	7C02 B10	9C51 A2	9C55 C8	AC01 C5	AC05 C3	IC02 C10	IC16 D1	IC51 A1	IC56 D1	IC60 B5	IC65 C7	IC73 D1
1C52 B3	2C52 A1	2C57 B6	2C62 B10	2C67 C4	2C72 D1	2C79 C8	2C85 B3	3C02 B10	3C51 A5	3C58 D3	3C65 D1	3C81 B2	5C55 A10	5C59 B5	7C00-2 B6	7C53 D3	9C52 A2	9C56 C2	AC02 C5	FC07 B10	IC10 B9	IC17 B7	IC52 B1	IC57 D2	IC61 C5	IC70 B6	IC74 C3
1C53 D3	2C53 A1	2C59 B1	2C63 B5	2C68 C7	2C73 B10	2C80 C10	2C86 B3	3C05 C10	3C53 B5	3C59 D2	3C66 D2	5C52 A1	5C56 C8	5C70 B2	7C01-1 B10	7C54 D2	9C53 B2	9C57 C2	AC03 C5	FC10 B2	IC14 A3	IC18 A10	IC54 D2	IC58 E2	IC63 C8	IC71 C6	IC75 B5
2C42 A9	2C55 A6	2C60 B1	2C64 A5	2C69 C5	2C74 B7	2C82 D1	3C00 B10	3C06 C10	3C56 D1	3C60 D1	3C67 E2	5C53 B6	5C57 D1	6C51 C2	7C01-2 B9	7C55 E2	9C54 C2	9C58 E2	AC04 C5	IC01 C10	IC15 C3	IC19 B10	IC55 C2	IC59 B5	IC64 C7	IC72 B6	



SSB: MPIF Main: Audio Source Selection



- 2K38 A3
- 2K39 A3
- 2K40 A3
- 2K41 A4
- 2K42 A4
- 2K43 B5
- 2K45 C5
- 2K58 G11
- 2K60 G11
- 2K61 H11
- 2K63 G11
- 2K67 E3
- 2K68 F3
- 2K69 F3
- 2K70 G3
- 2K71 H4
- 2K72 H3
- 2K73 G5
- 2K74 D4
- 2K75 E4
- 2K76 F4
- 2K77 G4
- 7C00-1 A6
- 9K01 A5
- FA07 D9
- FA08 E9
- FA09 E9
- FA10 F9
- IK01 E5
- IK02 A4
- IK03 F5
- IK04 F5
- IK05 F5
- IK06 G5
- IK07 G5
- IK08 G5
- IK09 H5
- IK10 H6
- IK11 A5
- IK15 G9
- IK16 G9
- IK17 G9
- IK18 G9
- IK19 H9
- IK20 H9
- IK21 D5
- IK22 E5
- IK23 B5

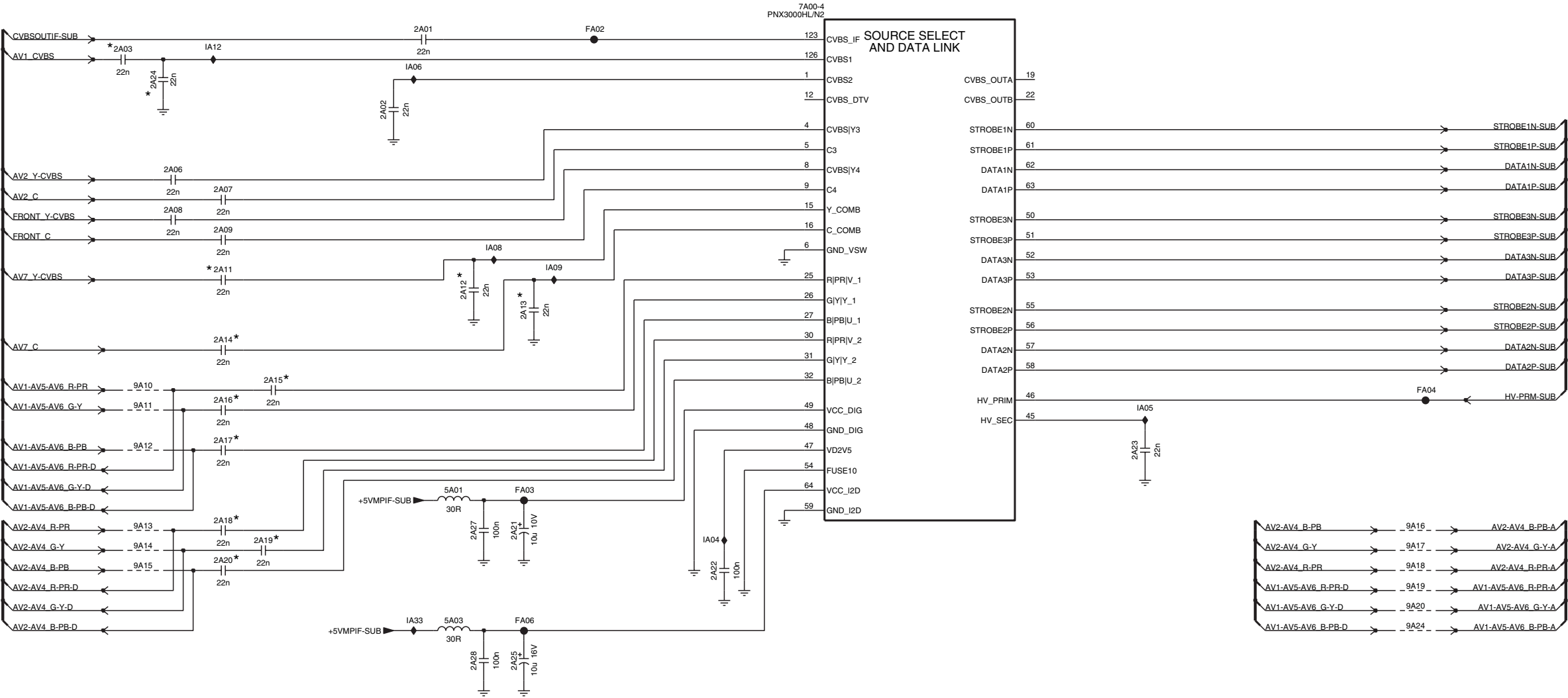
SSB: MPIF Sub: Video Source Selection

B4E

MPIF SUB: VIDEO SOURCE SELECTION

B4E

VIDEO SOURCE SELECTION



3104 313 6080.4

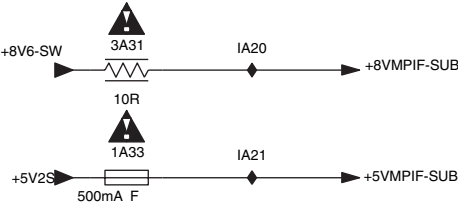
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120406

SSB: MPIF Sub: Supply & Control

B4F

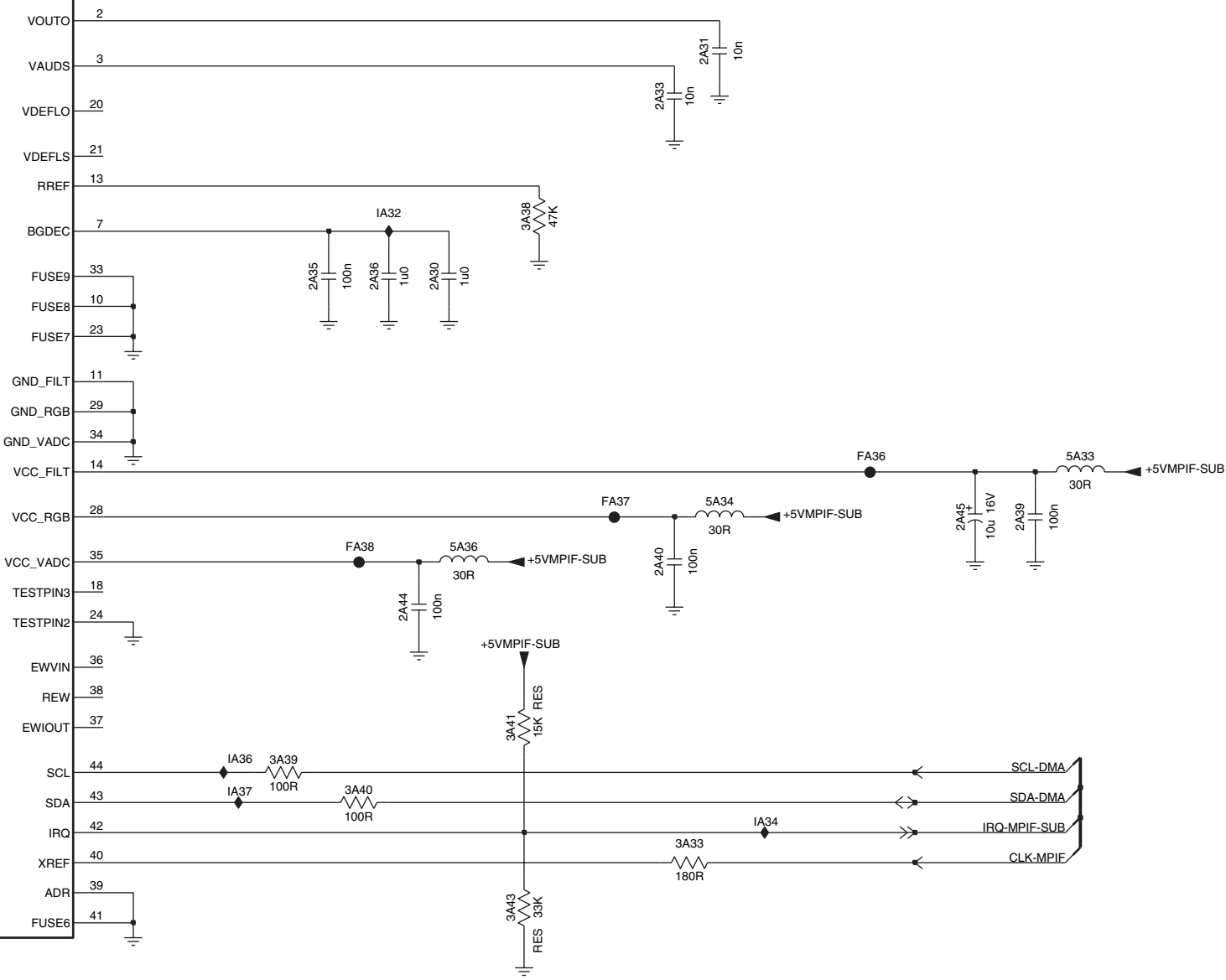
MPIF SUB: SUPPLY + CONTROL

B4F



7A00-3
PNX3000HL/N2

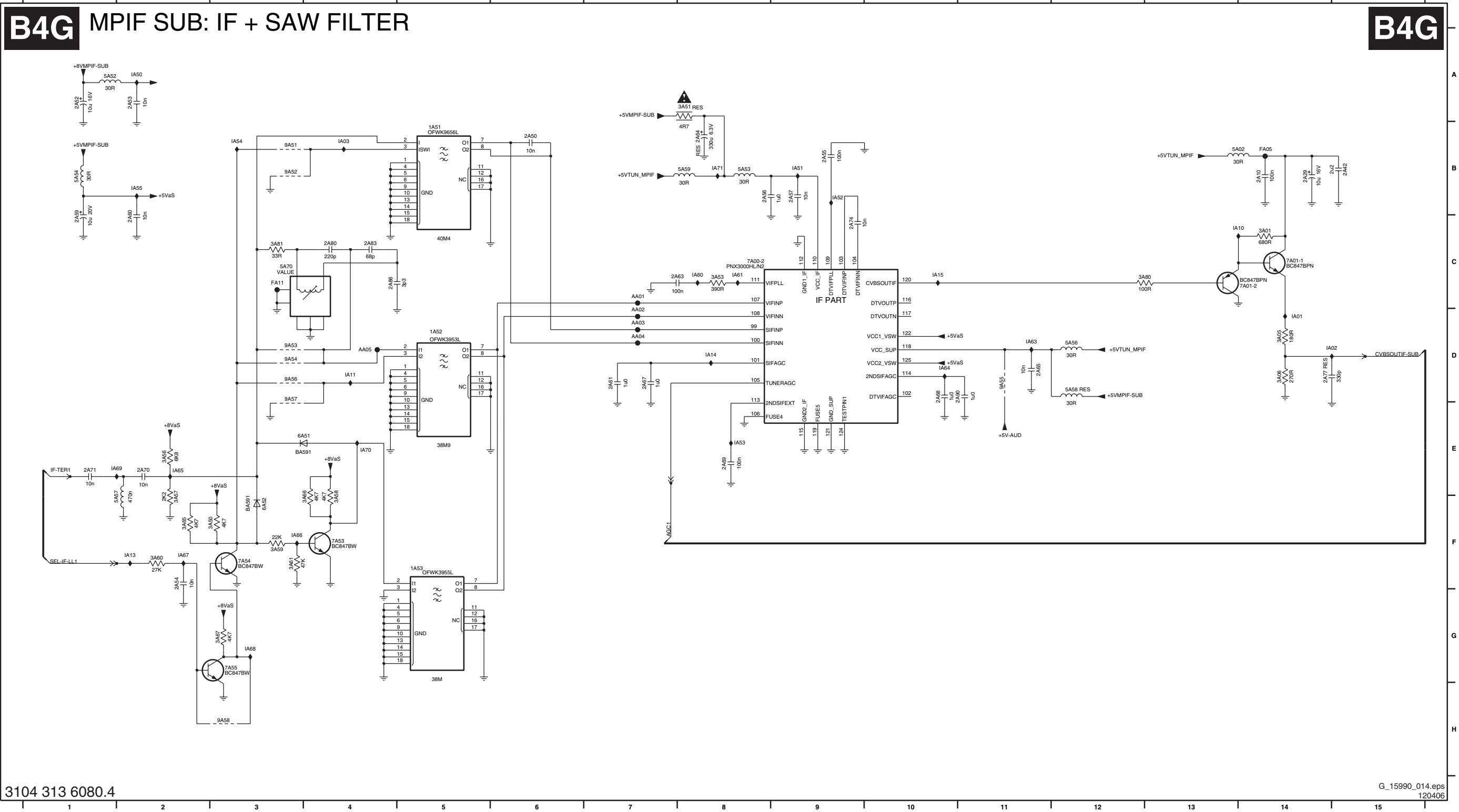
MPIF-SUPPLY
E/W & CONTROL



- 1A33 B1
- 2A30 C6
- 2A31 B8
- 2A33 B8
- 2A35 C6
- 2A36 C6
- 2A39 D9
- 2A40 D8
- 2A44 D6
- 2A45 D9
- 3A31 A1
- 3A33 F8
- 3A38 C7
- 3A39 E6
- 3A40 E6
- 3A41 E7
- 3A43 F7
- 5A33 D10
- 5A34 D8
- 5A36 D7
- 7A00-3 A4
- FA36 D9
- FA37 D7
- FA38 D6
- IA20 A2
- IA21 B2
- IA32 C6
- IA34 E8
- IA36 E6
- IA37 E6

SSB: MPiF Sub: IF & SAW Filter

1A51 B5	2A29 B14	2A53 A2	2A57 B9	2A63 C8	2A68 D10	2A74 C9	2A86 C4	3A06 D14	3A56 E2	3A60 F2	3A67 G3	5A52 A1	5A57 F2	6A51 E4	7A01-2 C14	9A51 B3	9A55 D11	AA01 C7	AA05 D4	IA02 D15	IA13 F2	IA51 B9	IA55 B2	IA64 D10	IA68 G3
1A52 D5	2A42 B15	2A54 F2	2A59 C1	2A64 B8	2A69 E8	2A77 D14	2A90 D11	3A50 F3	3A57 F2	3A61 F3	3A80 C13	5A53 B8	5A58 D12	6A52 F3	7A53 F4	9A52 B3	9A56 D3	AA02 D7	FA05 B14	IA03 B4	IA14 D8	IA52 B9	IA60 C8	IA65 E2	IA69 E2
1A53 F5	2A50 B6	2A55 B9	2A60 C2	2A65 D11	2A70 E2	2A80 C4	3A01 C14	3A51 A8	3A58 F4	3A65 F2	3A81 C3	5A54 B1	5A59 B8	7A00-2 C8	7A54 F3	9A53 D3	9A57 D3	AA03 D7	FA11 C3	IA10 C14	IA15 C10	IA53 E8	IA61 C8	IA66 F3	IA70 E4
2A10 B14	2A52 A1	2A56 B8	2A61 D7	2A67 D7	2A71 E1	2A83 C4	3A05 D14	3A53 C8	3A59 F3	3A66 F4	5A02 B14	5A56 D12	5A70 C3	7A01-1 C14	7A55 G3	9A54 D3	9A58 H3	AA04 D7	IA01 D14	IA11 D4	IA50 A2	IA54 B3	IA63 D11	IA67 F2	IA71 B8



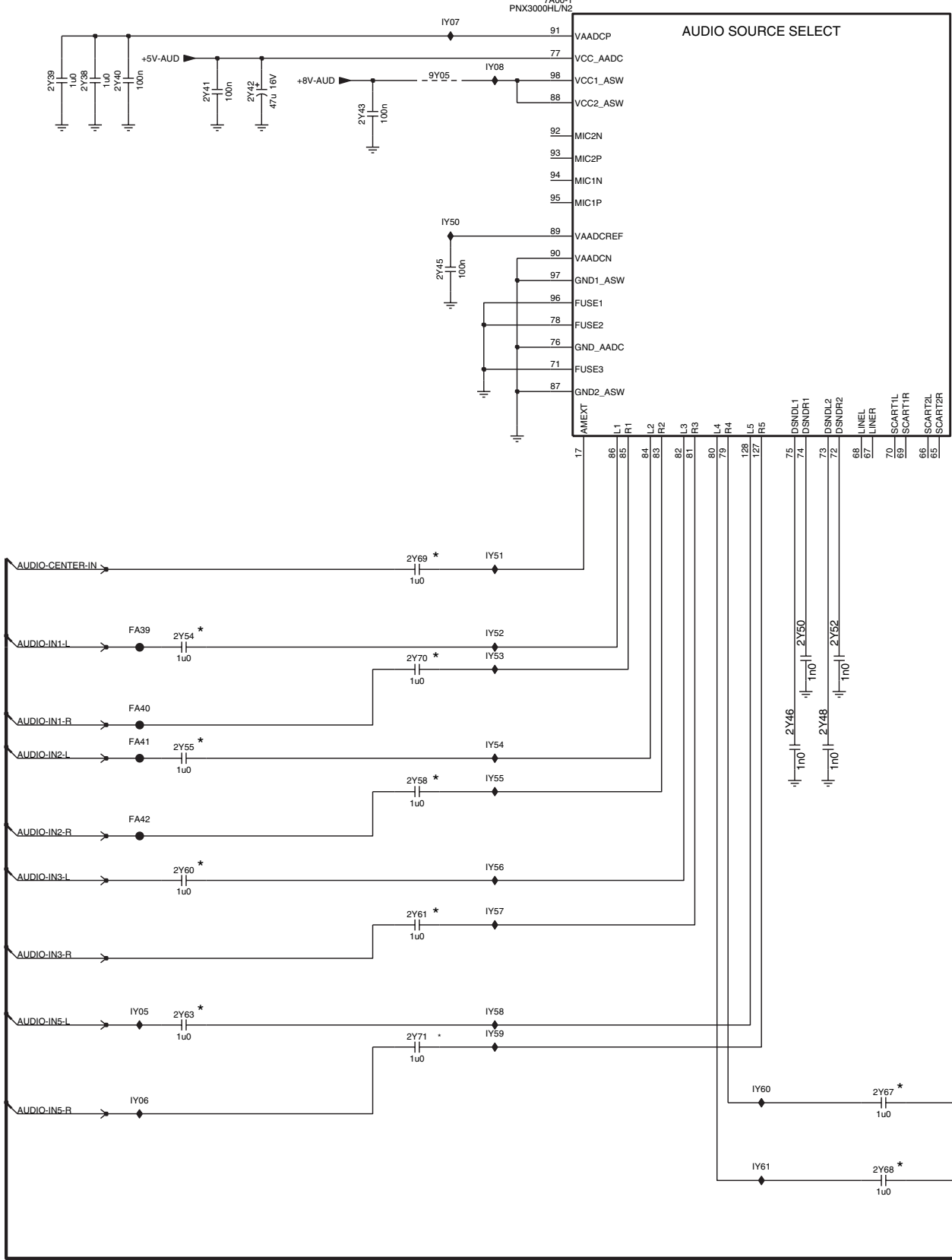
SSB: MPIF Sub: Audio Source Selection

B4H

MPIF SUB: AUDIO SOURCE SELECTION

B4H

AUDIO SOURCE SELECTION



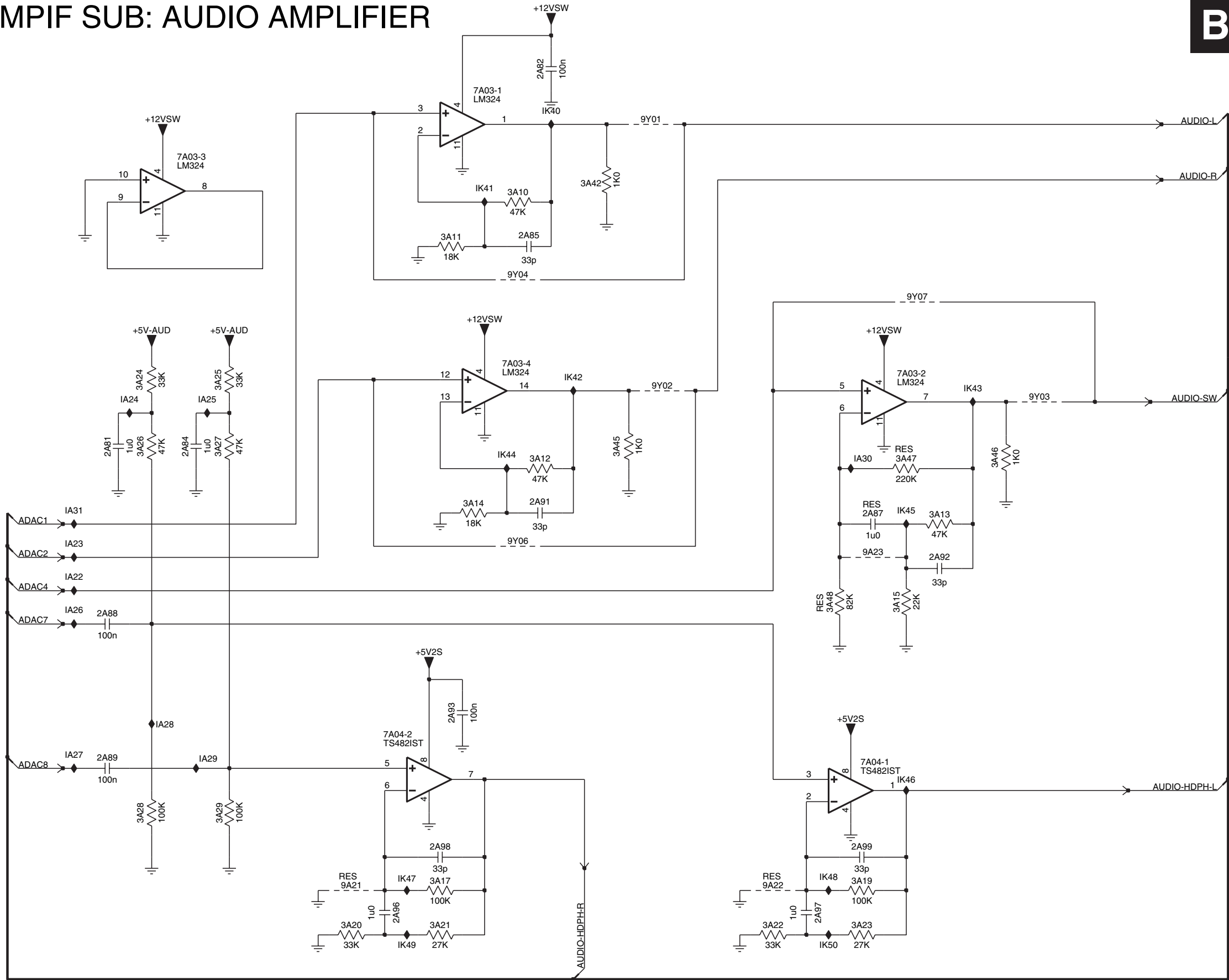
2Y38 B2
2Y39 B2
2Y40 B2
2Y41 B3
2Y42 B3
2Y43 B4
2Y45 C4
2Y46 F6
2Y48 F7
2Y50 E7
2Y52 E7
2Y54 E3
2Y55 F3
2Y58 F4
2Y60 G3
2Y61 G4
2Y63 H3
2Y67 H7
2Y68 I7
2Y69 E4
2Y70 E4
2Y71 H4
7A00-1 A5
9Y05 B4
FA39 E2
FA40 F2
FA41 F2
FA42 F2
IY05 H2
IY06 H2
IY07 A4
IY08 A5
IY50 B4
IY51 E5
IY52 E5
IY53 E5
IY54 F5
IY55 F5
IY56 G5
IY57 G5
IY58 H5
IY59 H5
IY60 H6
IY61 I6

SSB: MPIF Sub: Audio Amplifier

B4 I

MPIF SUB: AUDIO AMPLIFIER

B4 I



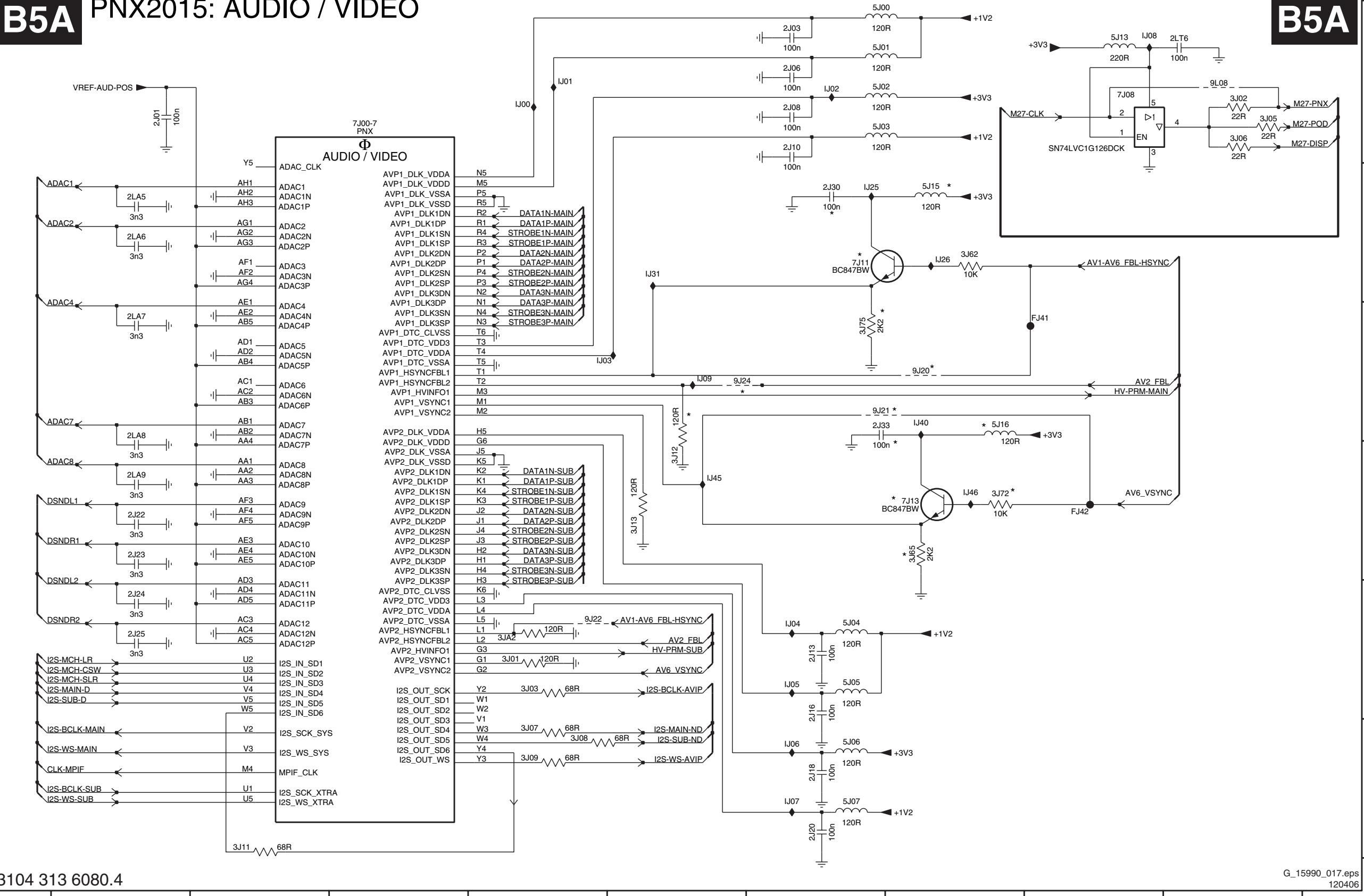
- 2A81 C2
- 2A82 A5
- 2A84 C2
- 2A85 B5
- 2A87 D7
- 2A88 D2
- 2A89 E2
- 2A91 D5
- 2A92 D7
- 2A93 E4
- 2A96 F4
- 2A97 F6
- 2A98 F4
- 2A99 F7
- 3A10 B5
- 3A11 B4
- 3A12 C5
- 3A13 D7
- 3A14 D4
- 3A15 D7
- 3A17 F4
- 3A19 F7
- 3A20 F3
- 3A21 F4
- 3A22 F6
- 3A23 F7
- 3A24 C2
- 3A25 C3
- 3A26 C2
- 3A27 C3
- 3A28 E2
- 3A29 E3
- 3A42 A5
- 3A45 C5
- 3A46 C8
- 3A47 C7
- 3A48 D7
- 7A03-1 A4
- 7A03-2 C7
- 7A03-3 A2
- 7A03-4 C4
- 7A04-1 E7
- 7A04-2 E4
- 9A21 F3
- 9A22 F6
- 9A23 D7
- 9Y01 A5
- 9Y02 C5
- 9Y03 C8
- 9Y04 B5
- 9Y06 D5
- 9Y07 B7
- IA22 D2
- IA23 D2
- IA24 C2
- IA25 C3
- IA26 D2
- IA27 E2
- IA28 E2
- IA29 E3
- IA30 C7
- IA31 D2
- IK40 A5
- IK41 A4
- IK42 C5
- IK43 C7
- IK44 C4
- IK45 D7
- IK46 E7
- IK47 F4
- IK48 F7
- IK49 F4
- IK50 F7

SSB: PNX2015: Audio / Video

B5A

PNX2015: AUDIO / VIDEO

B5A

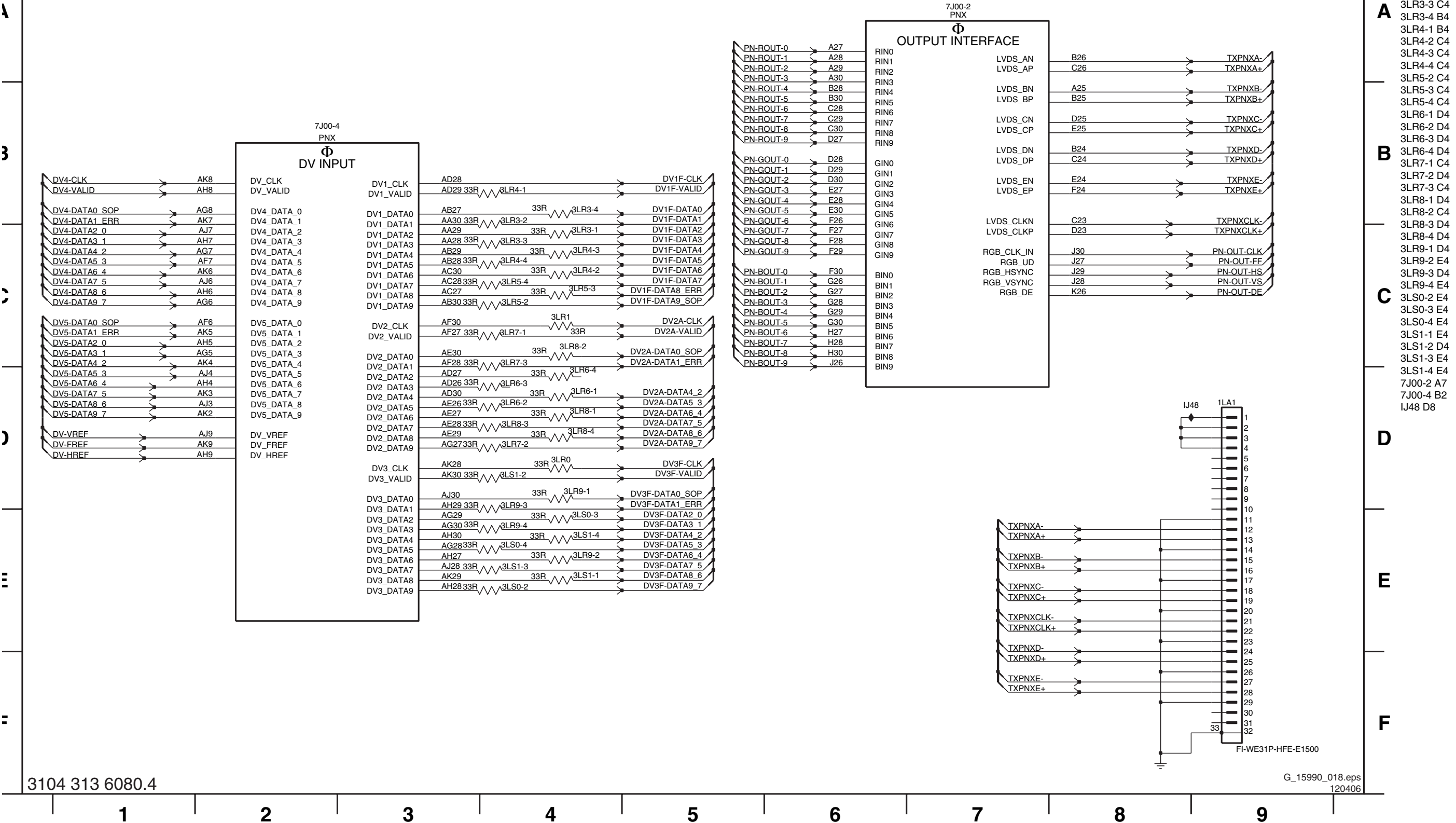


- 2J01 A1
- 2J03 A6
- 2J06 A6
- 2J08 A6
- 2J10 A6
- 2J13 E6
- 2J16 E6
- 2J18 F6
- 2J20 F6
- 2J22 D1
- 2J23 D1
- 2J24 E1
- 2J25 E1
- 2J30 B6
- 2J33 C6
- 2LA5 B1
- 2LA6 B1
- 2LA7 C1
- 2LA8 C1
- 2LA9 D1
- 2LT6 A9
- 3J01 E4
- 3J02 A9
- 3J03 E4
- 3J05 A9
- 3J06 A9
- 3J07 F4
- 3J08 F4
- 3J09 F4
- 3J11 F2
- 3J12 D5
- 3J13 D5
- 3J62 B7
- 3J65 D7
- 3J72 D7
- 3J75 C6
- 3JA2 E4
- 5J00 A6
- 5J01 A6
- 5J02 A6
- 5J03 A6
- 5J04 E6
- 5J05 E6
- 5J06 F6
- 5J07 F6
- 5J13 A8
- 5J15 B7
- 5J16 C7
- 7J00-7 A3
- 7J08 A8
- 7J11 B6
- 7J13 D7
- 9J20 C7
- 9J21 C6
- 9J22 E4
- 9J24 C5
- 9L08 A9
- FJ41 C8
- FJ42 D8
- IJ00 A4
- IJ01 A4
- IJ02 A6
- IJ03 C4
- IJ04 E6
- IJ05 E6
- IJ06 F6
- IJ07 F6
- IJ08 A8
- IJ09 C5
- IJ25 B6
- IJ26 B7
- IJ31 B5
- IJ40 C7
- IJ45 D5
- IJ46 D7

SSB: PNX2015: DV I/O Interface

B5B PNX 2015: DV I/O INTERFACE

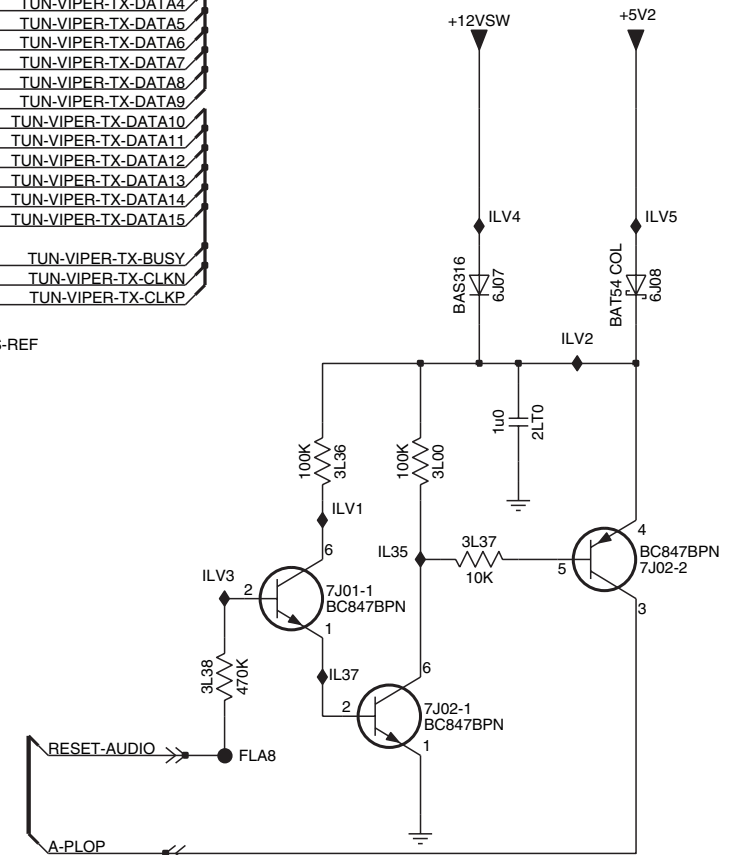
B5B



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B5C



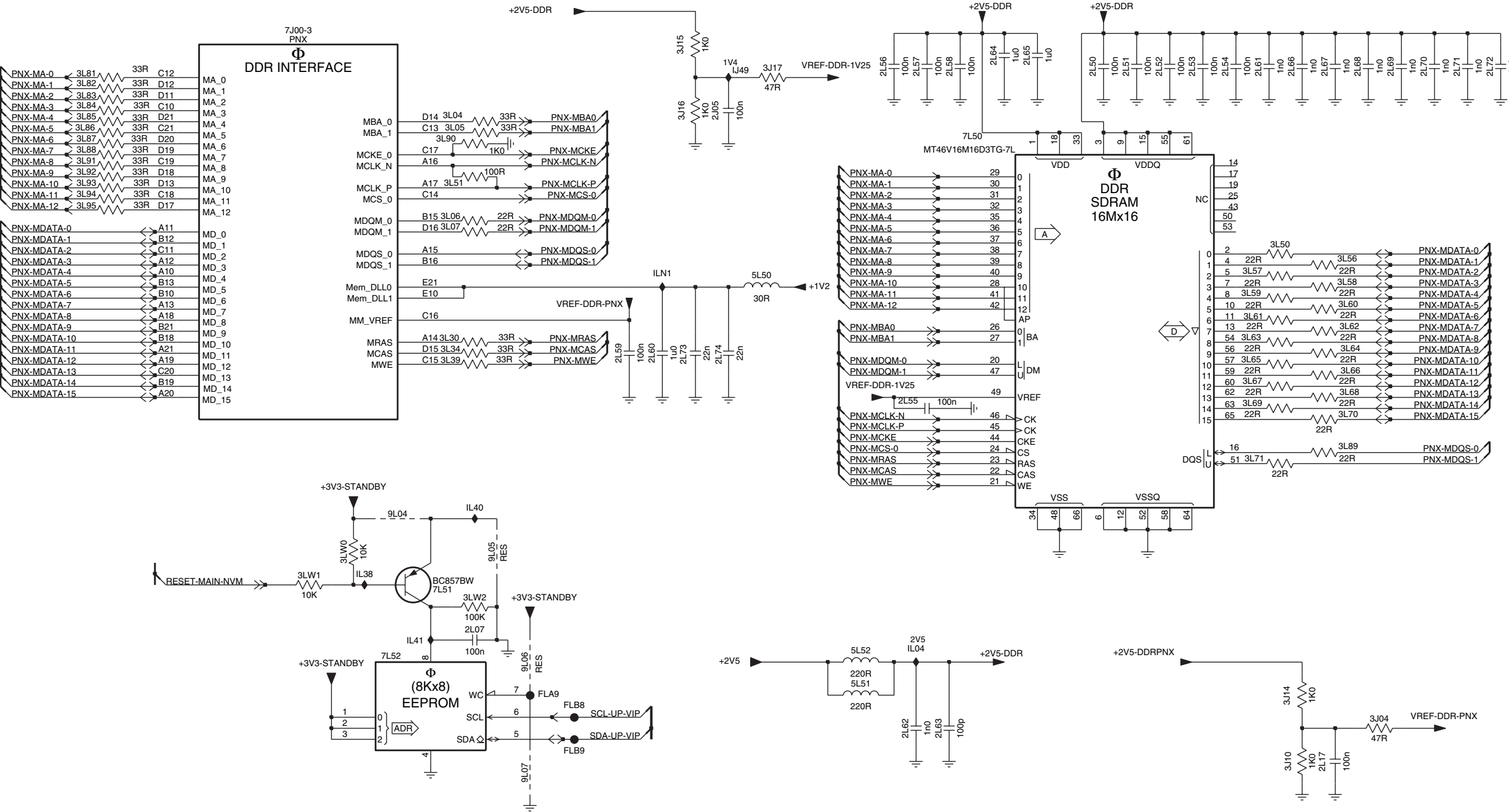
2L00 F2
2L02 F2
2L04 F3
2L05 F4
2L09 F5
2L10 F6
2LT0 E9
3L00 E8
3L08 D6
3L09 A6
3L10 A6
3L11 B6
3L12 B6
3L13 B6
3L14 B6
3L15 B6
3L16 B6
3L17 B6
3L18 B6
3L19 B6
3L20 F5
3L21 B6
3L22 E5
3L23 B6
3L24 F5
3L25 B6
3L26 F3
3L27 B6
3L28 F2
3L29 B6
3L31 C6
3L32 F2
3L33 C6
3L35 D6
3L36 E8
3L37 E9
3L38 E8
3L41 B3
3L42 A3
3L43 A3
3L44 B3
3L45 B3
3L46 B3
3L47 B3
3L48 B3
3L49 B3
3L52 B3
3L53 B3
3L54 B3
3L55 B3
3L72 B3
3L73 B3
3L74 B3
3L75 C3
3L76 C3
3L77 D4
3L78 D3
3L79 A3
3L80 A3
6J07 D9
6J08 D9
7J00-1 A5
7J01-1 E8
7J02-1 F8
7J02-2 E9
FLA8 F8
IL06 F3
IL08 F6
IL09 E2
IL19 E4
IL35 E8
IL37 E8
ILV1 E8
ILV2 D9
ILV3 E8

SSB: PNX2015: DDR Interface

B5D

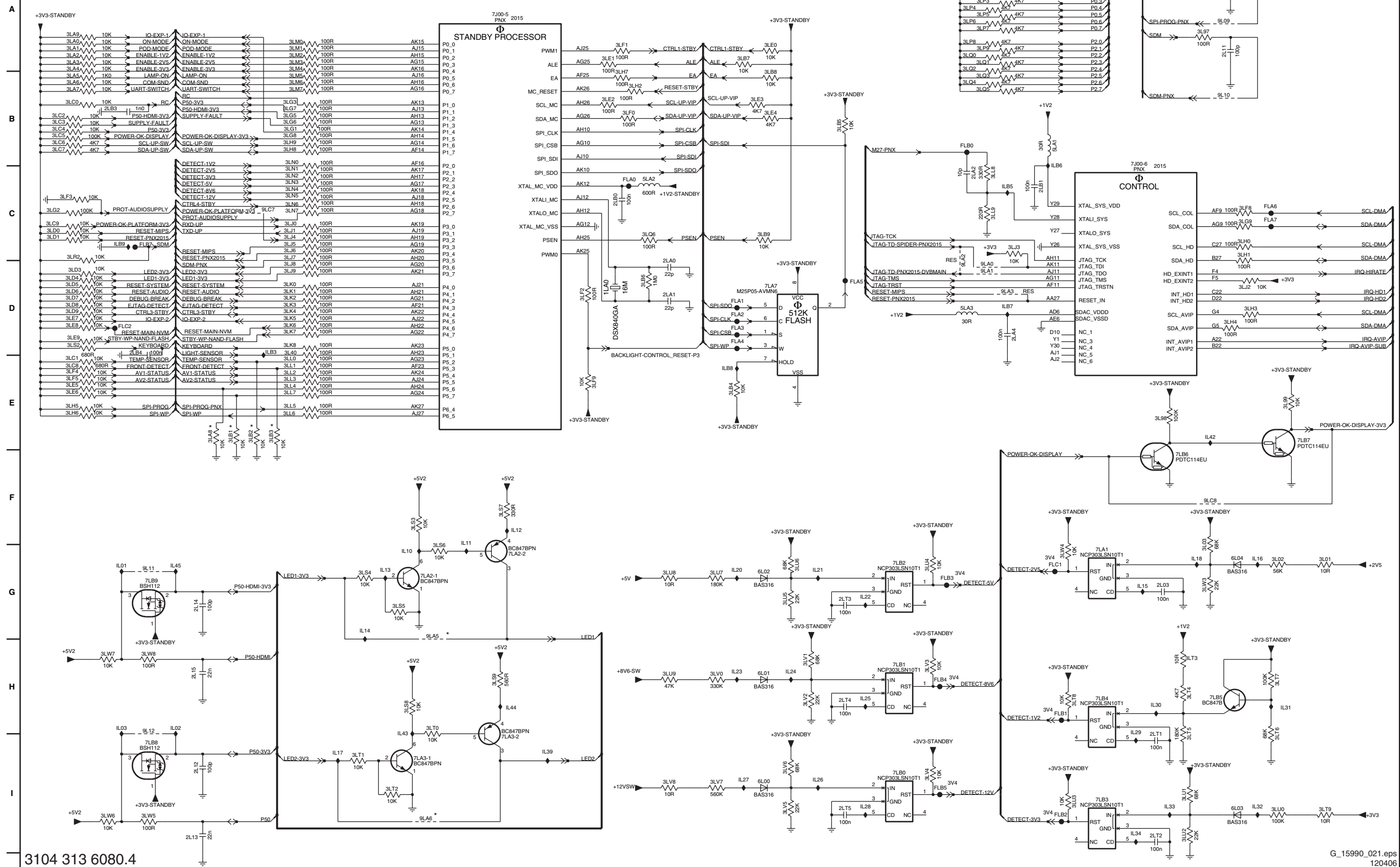
PNX 2015: DDR INTERFACE

B5D

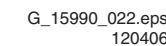


SSB: PN2015: Stand-by & Control

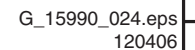
B5E PN2015: STANDBY & CONTROL



B5F PNX 2015: SUPPLY

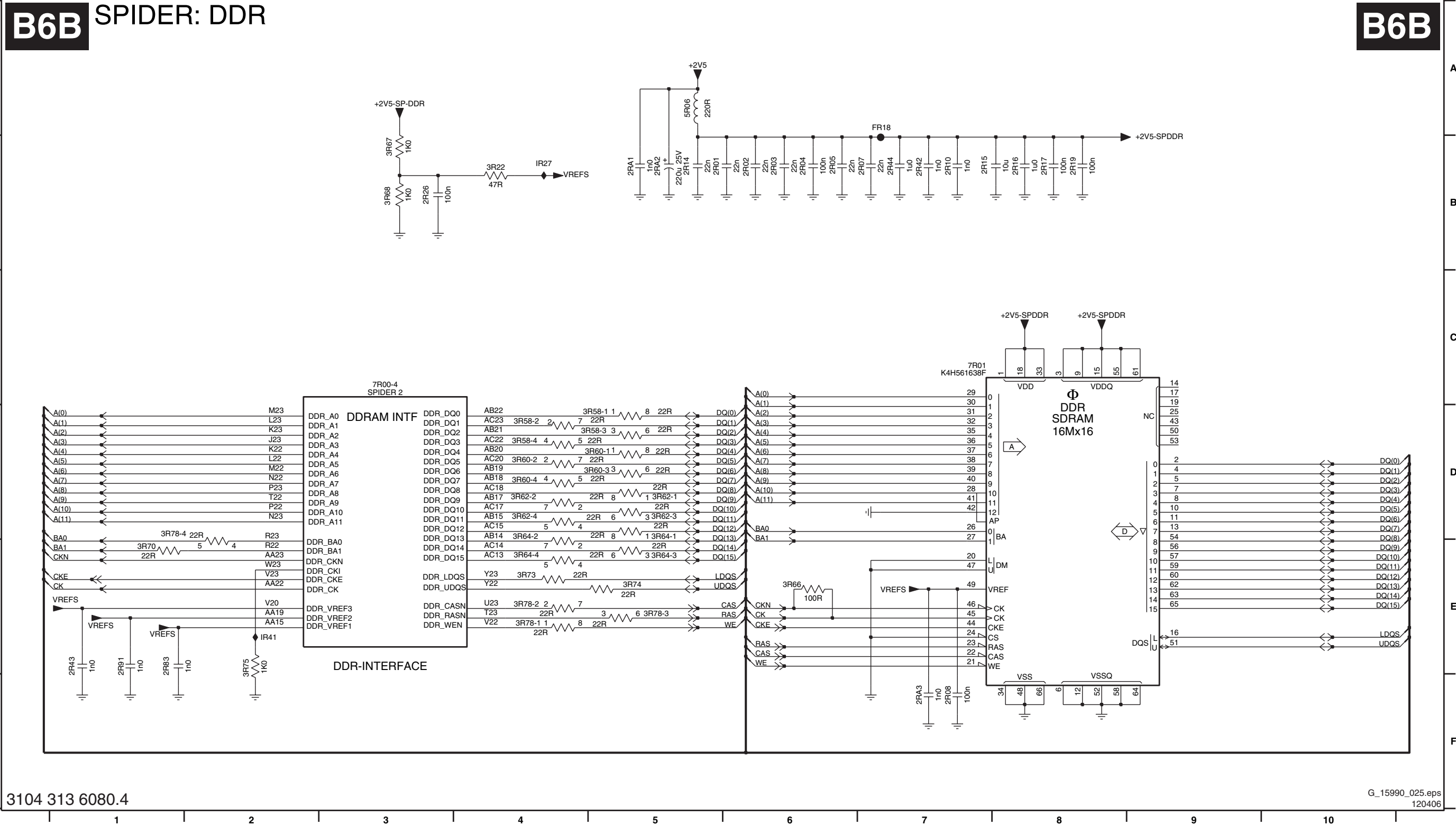


SPIDER: TUNNELBUS



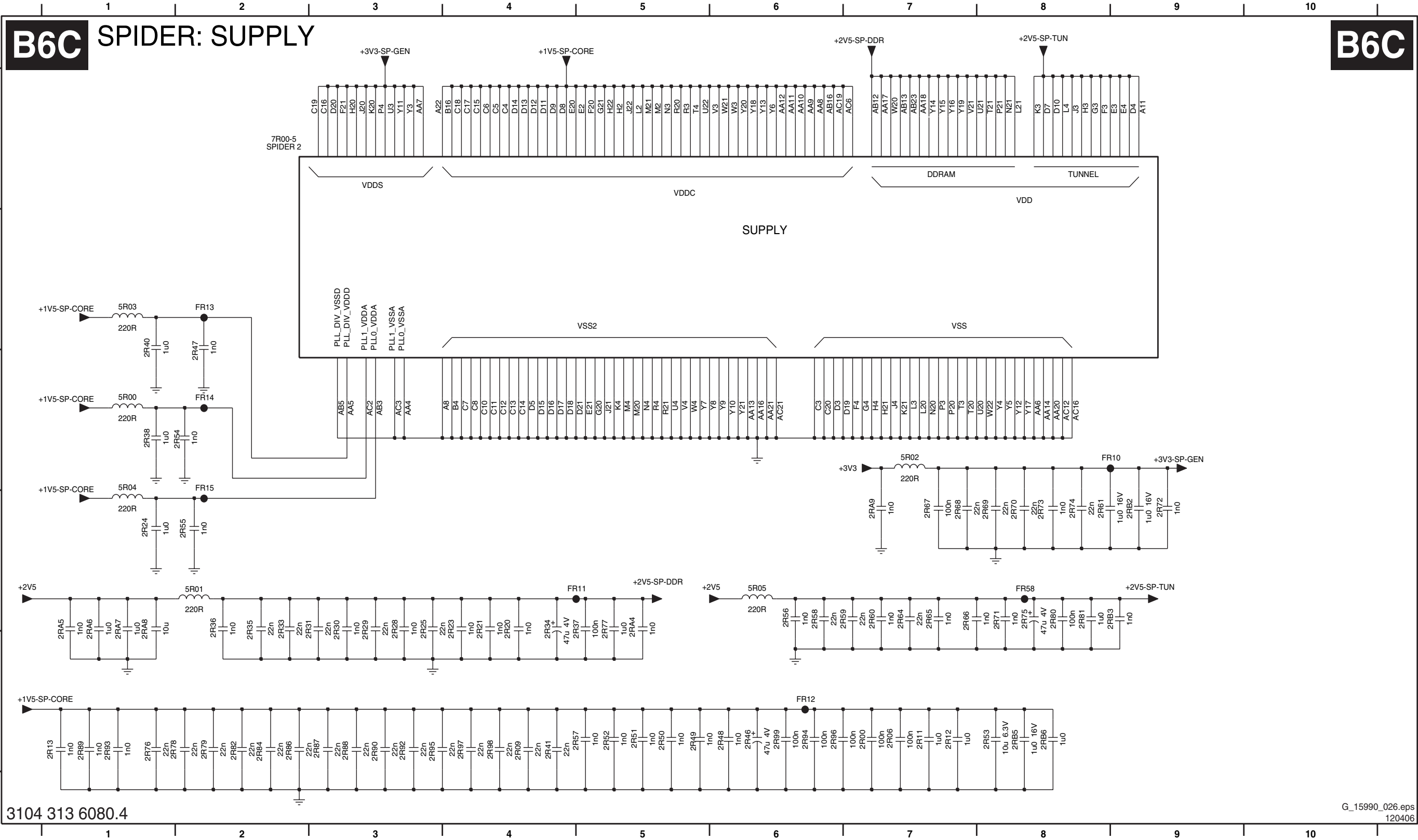
SSB: Spider: DDR

2R01 B5	2R04 B6	2R08 F7	2R15 B7	2R19 B8	2R43 E1	2R91 E1	2RA3 F7	3R58-2 D4	3R60-1 D5	3R60-4 D4	3R62-3 D5	3R64-2 D4	3R66 E6	3R70 E1	3R75 E2	3R78-3 E5	7R00-4 C3	IR27 B4
2R02 B6	2R05 B6	2R10 B7	2R16 B8	2R26 B3	2R44 B7	2RA1 B5	3R22 B4	3R58-3 D5	3R60-2 D4	3R62-1 D5	3R62-4 D4	3R64-3 E5	3R67 B3	3R73 E4	3R78-1 E4	3R78-4 D1	7R01 C7	IR41 E2
2R03 B6	2R07 B7	2R14 B5	2R17 B8	2R42 B7	2R83 E1	2RA2 B5	3R58-1 D5	3R58-4 D4	3R60-3 D5	3R62-2 D4	3R64-1 D5	3R64-4 E4	3R68 B3	3R74 E5	3R78-2 E4	5R06 A5	FR18 A7	



SSB: Spider: Supply

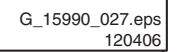
2R00 E7	2R13 E1	2R25 D3	2R33 D2	2R38 C1	2R48 E6	2R53 E8	2R58 D6	2R65 D7	2R70 D8	2R75 D8	2R80 D8	2R87 E3	2R93 E1	2R98 E4	2RA7 D1	2RB5 E8	5R03 B1	FR11 D5	FR58 D8
2R06 E7	2R20 D4	2R28 D3	2R34 D4	2R40 B1	2R49 E5	2R54 C1	2R59 D7	2R66 D7	2R71 D8	2R76 E1	2R81 D8	2R88 E3	2R94 E6	2R99 E6	2RA8 D1	2RB6 E8	5R04 C1	FR12 E6	
2R09 E4	2R21 D4	2R29 D3	2R35 D2	2R41 E4	2R50 E5	2R55 D2	2R60 D7	2R67 D7	2R72 D9	2R77 D5	2R82 E2	2R89 E1	2R95 E3	2RA4 D5	2RA9 D7	5R00 C1	5R05 D6	FR13 B2	
2R11 E7	2R23 D4	2R30 D3	2R36 D2	2R46 E6	2R51 E5	2R56 D6	2R61 D8	2R68 D7	2R73 D8	2R78 E2	2R84 E2	2R90 E3	2R96 E6	2RA5 D1	2RB2 D9	5R01 D2	7R00-5 A2	FR14 C2	
2R12 E7	2R24 D1	2R31 D2	2R37 D5	2R47 C2	2R52 E5	2R57 E4	2R64 D7	2R69 D8	2R74 D8	2R79 E2	2R86 E2	2R92 E3	2R97 E4	2RA6 D1	2RB3 D9	5R02 C7	FR10 C9	FR15 D2	



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B6D SPIDER: DEBUG

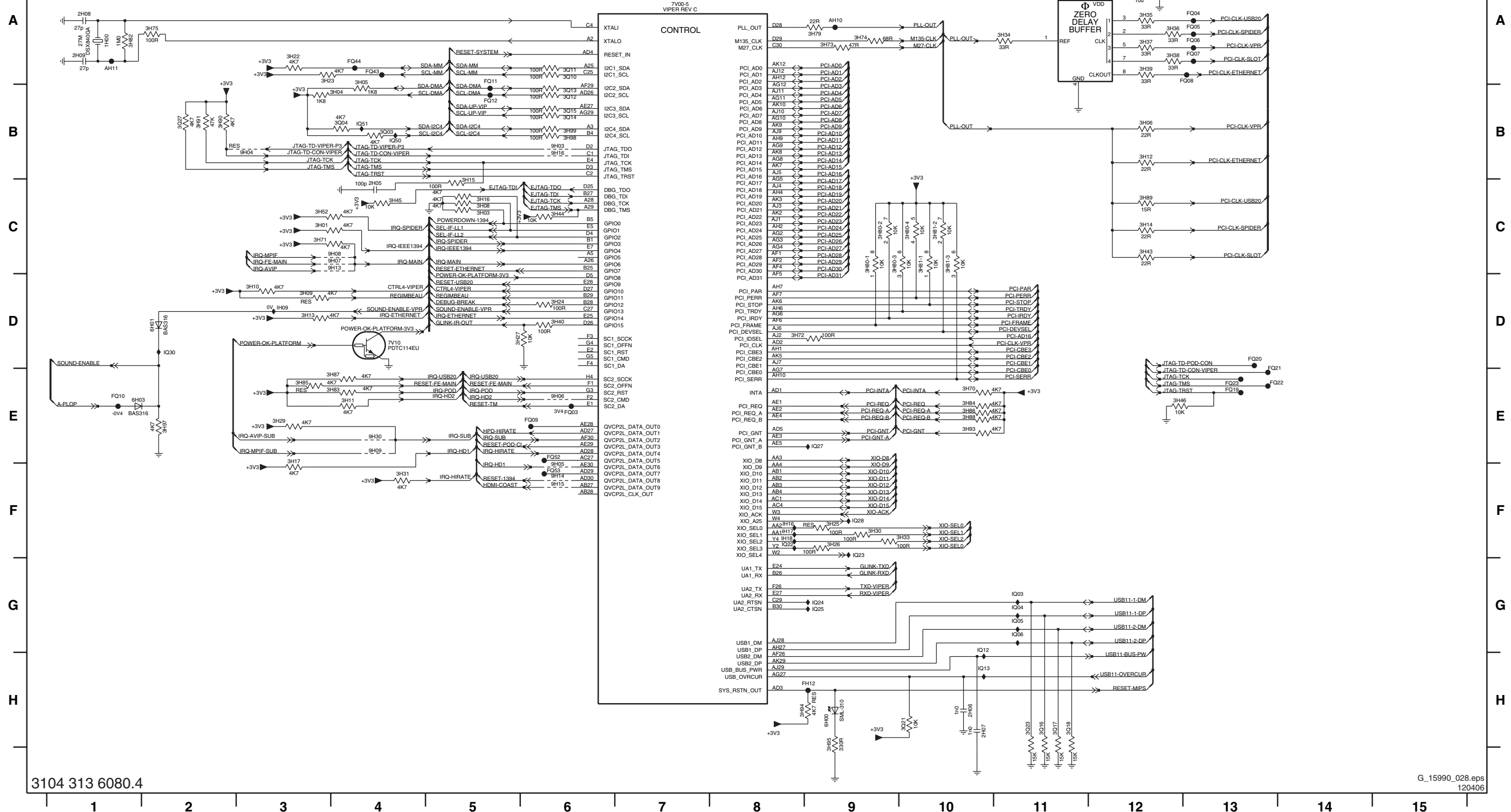


SSB: Spider: Control

1H00 A1	2H09 A1	3H06 B12	3H13 D3	3H23 A3	3H30 F9	3H37 A12	3H45 C4	3H73 A9	3H80-3 C9	3H83 E4	3H89 C12	3H97 E2	3Q11 A6	3Q17 H11	6H01 D2	9H04 B3	9H13 C4	AH11 A1	FQ07 A13	FQ19 E13	FQ44 A4	IH18 F8	IQ13 H10	IQ28 F9
2H04 A12	2H10 A12	3H08 C5	3H14 C12	3H24 D6	3H31 F4	3H38 A12	3H46 E12	3H74 A9	3H80-4 C10	3H84 E10	3H90 B2	3H98 B6	3Q12 B6	3Q18 H11	6H03 E1	9H05 F6	9H14 F6	FH12 H9	FQ08 A13	FQ20 D13	FQ52 E6	IQ03 G11	IQ22 F8	IQ30 D2
2H05 C4	3H01 C3	3H09 D3	3H15 C5	3H25 F9	3H33 F10	3H39 A12	3H52 C3	3H75 A2	3H81-1 C10	3H85 E3	3H91 B2	3H99 B6	3Q13 B6	3Q21 H10	7V00-5 A7	9H06 E6	9H15 F6	FQ03 E6	FQ09 E6	FQ21 E13	FQ53 F6	IQ04 G11	IQ23 F9	IQ50 B4
2H06 H10	3H03 C5	3H10 D3	3H16 C5	3H26 F9	3H34 A11	3H40 D6	3H70 E10	3H79 A9	3H81-2 C10	3H86 E10	3H93 B2	3Q03 B4	3Q14 B6	3Q23 H11	7V05 A11	9H07 C4	9H16 B6	FQ04 A13	FQ10 E1	FQ22 E13	IH09 D3	IQ05 G11	IQ24 G9	IQ51 B4
2H07 H10	3H04 B4	3H11 E4	3H17 E3	3H27 D5	3H35 A12	3H43 C12	3H71 C3	3H80-1 C9	3H81-3 C10	3H87 E4	3H94 H8	3Q04 B4	3Q15 B6	3Q27 B2	7V10 D4	9H08 C4	9H10 E4	FQ05 A13	FQ11 A5	FQ23 E13	IH16 F8	IQ06 G11	IQ25 G9	
2H08 A1	3H05 A4	3H12 B12	3H22 A3	3H29 E3	3H36 A12	3H44 C6	3H72 D8	3H80-2 C9	3H82 A1	3H88 E10	3H95 H9	3Q10 A6	3Q16 H11	6H00 H9	9H03 B6	9H09 E4	AH10 A9	FQ06 A13	FQ12 B5	FQ43 A4	IH17 F8	IQ12 G10	IQ27 E9	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15									

B7A VIPER: CONTROL

B7A

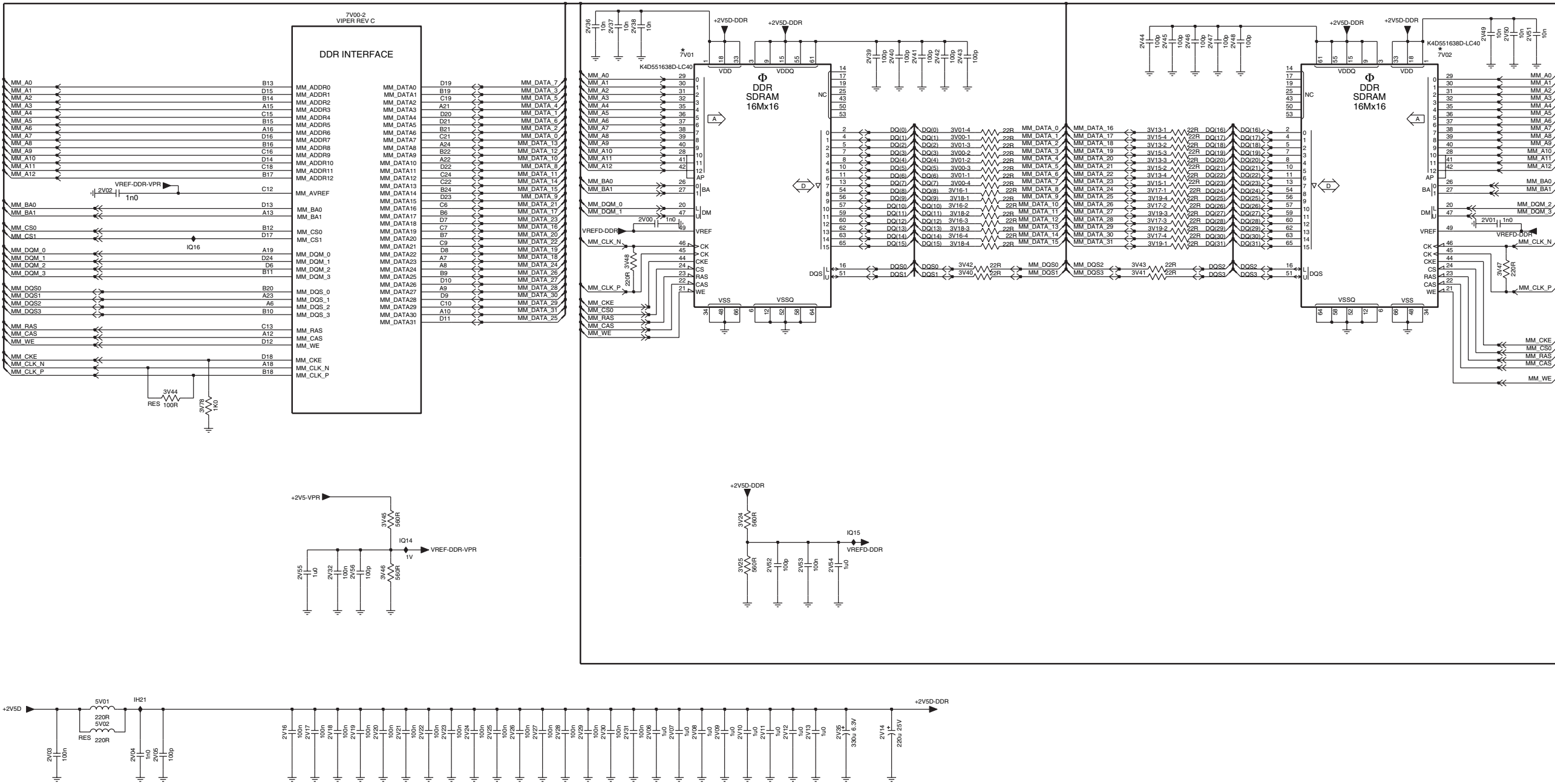


SSB: Spider: Main Memory

B7B

VIPER: MAIN MEMORY

B7B



- 2V01 C15
- 2V02 C2
- 2V03 H1
- 2V04 H2
- 2V05 H2
- 2V06 H7
- 2V07 H7
- 2V08 H7
- 2V09 H8
- 2V10 H8
- 2V11 H8
- 2V12 H8
- 2V13 H8
- 2V14 H9
- 2V16 H3
- 2V17 H4
- 2V18 H4
- 2V19 H4
- 2V20 H4
- 2V21 H5
- 2V22 H5
- 2V23 H5
- 2V24 H5
- 2V25 H5
- 2V26 H6
- 2V27 H6
- 2V28 H6
- 2V29 H6
- 2V30 H6
- 2V31 H7
- 2V32 F4
- 2V35 H9
- 2V36 A9
- 2V37 A7
- 2V38 A7
- 2V39 A9
- 2V40 A9
- 2V41 A9
- 2V42 A10
- 2V43 A10
- 2V44 A12
- 2V45 A12
- 2V46 A12
- 2V47 A12
- 2V48 A12
- 2V49 A15
- 2V50 A15
- 2V51 A15
- 2V52 F8
- 2V53 F8
- 2V54 F9
- 2V55 F4
- 2V56 F4
- 3V00-1 B10
- 3V00-2 B10
- 3V00-3 B10
- 3V00-4 B10
- 3V01-1 B10
- 3V01-2 B10
- 3V01-3 B10
- 3V01-4 B10
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- 3V13-2 B12
- 3V13-3 B12
- 3V13-4 B12
- 3V15-1 B12
- 3V15-2 B12
- 3V15-3 B12
- 3V15-4 B12
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- 3V16-2 C10
- 3V16-3 C10
- 3V16-4 C10
- 3V17-1 C12
- 3V17-2 C12
- 3V17-3 C12
- 3V17-4 C12
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- 3V18-2 C10
- 3V18-3 C10
- 3V18-4 C10
- 3V19-1 C12
- 3V19-2 C12
- 3V19-3 C12
- 3V19-4 C12
- 3V24 F8
- 3V25 F8
- 3V40 C10
- 3V41 C11
- 3V42 C10
- 3V43 C11
- 3V44 D2
- 3V45 F4
- 3V46 F4
- 3V47 C15
- 3V48 C7
- 3V78 E3
- 5V01 G2
- 5V02 H2
- 7V00-2 A4
- 7V01 A7
- 7V02 A14
- IH21 G2
- IQ14 F5
- IQ15 F9

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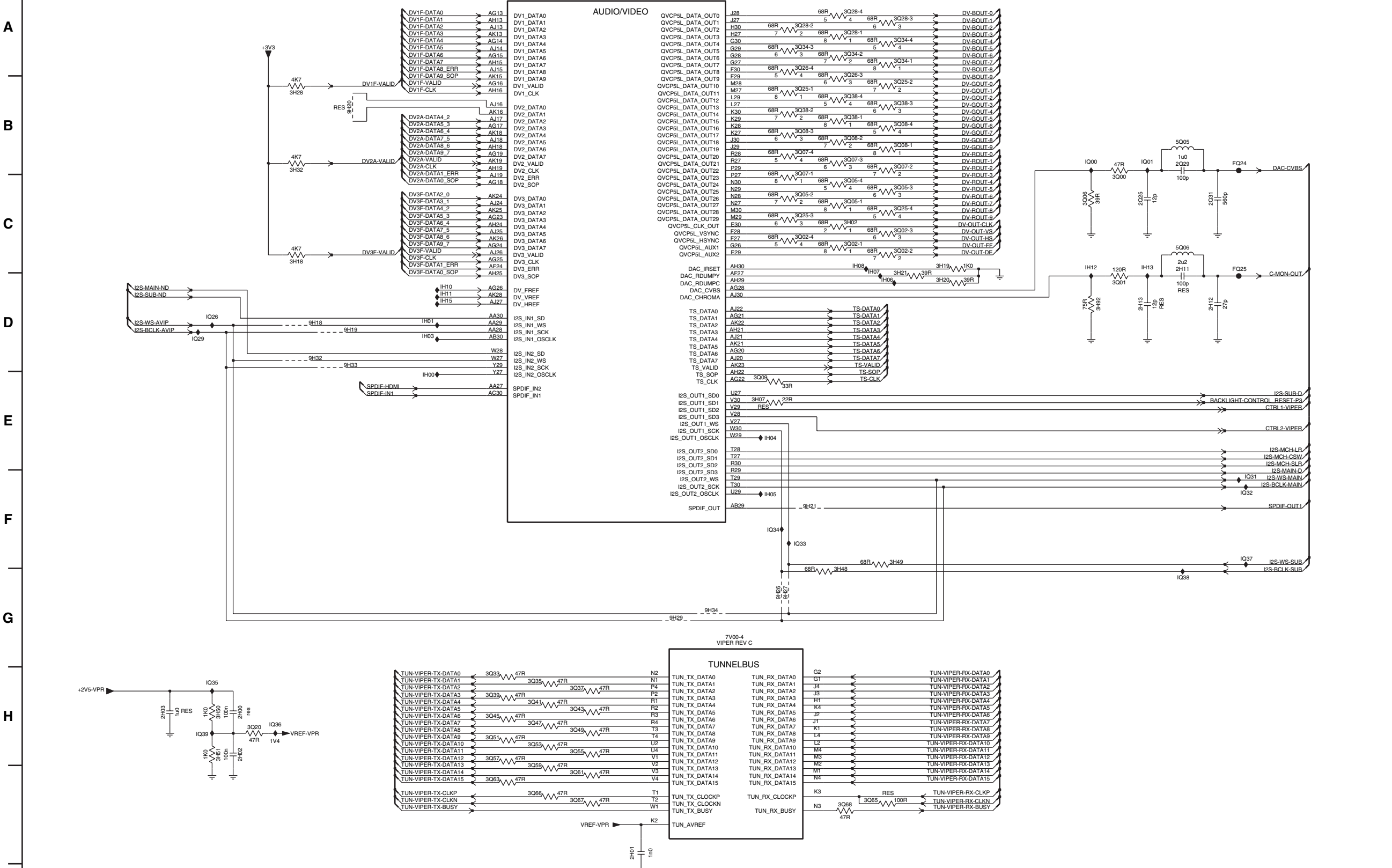
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SSB: Viper: A/V + Tunnelbus

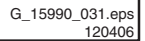
B7C

VIPER: A/V + TUNNELBUS

B7C



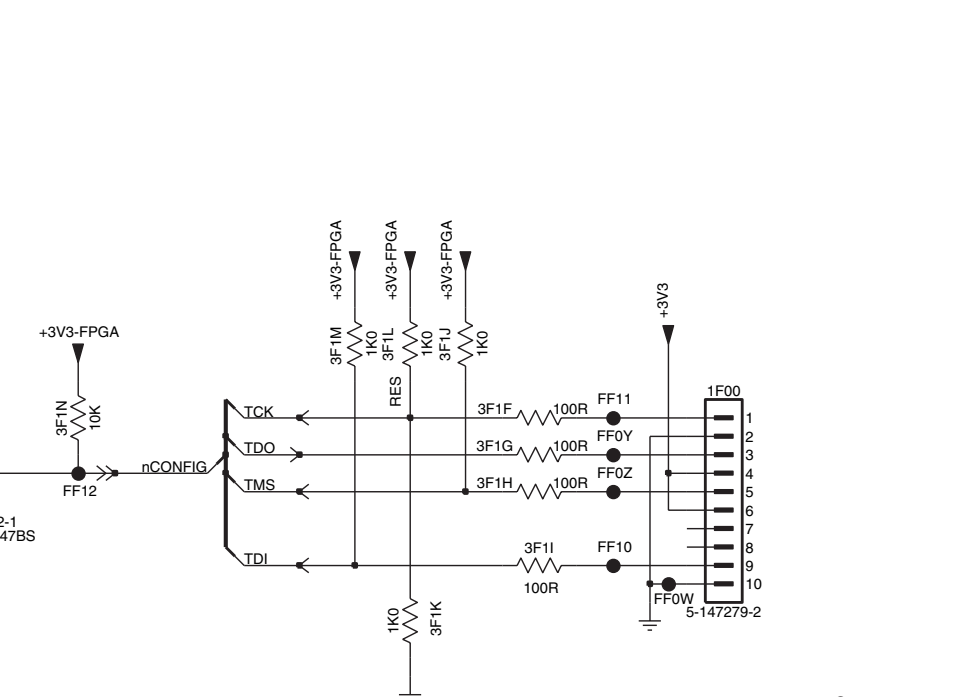
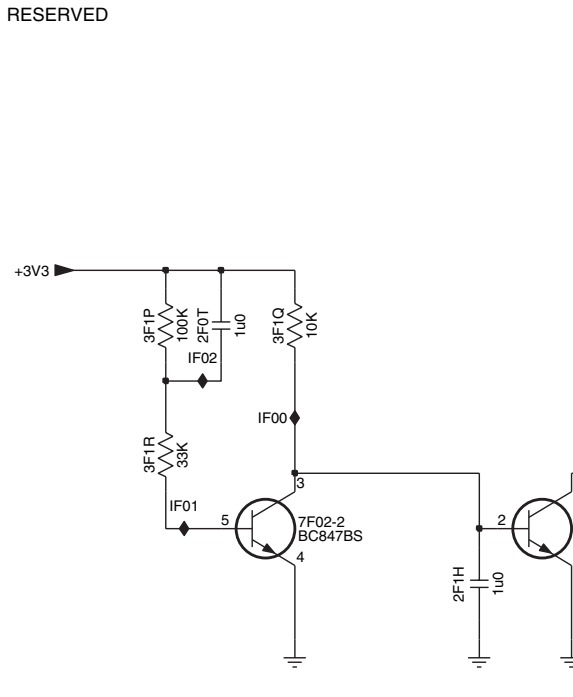
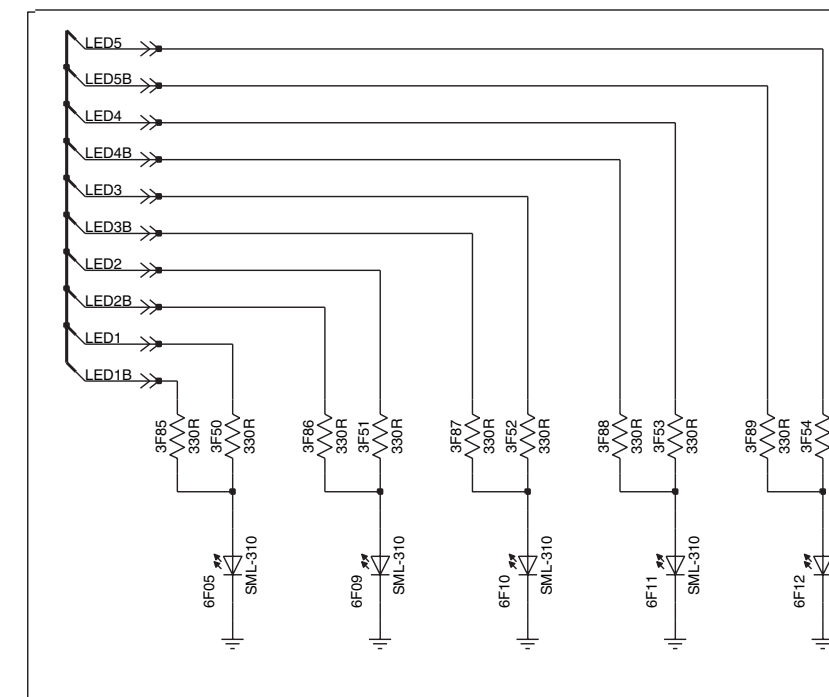
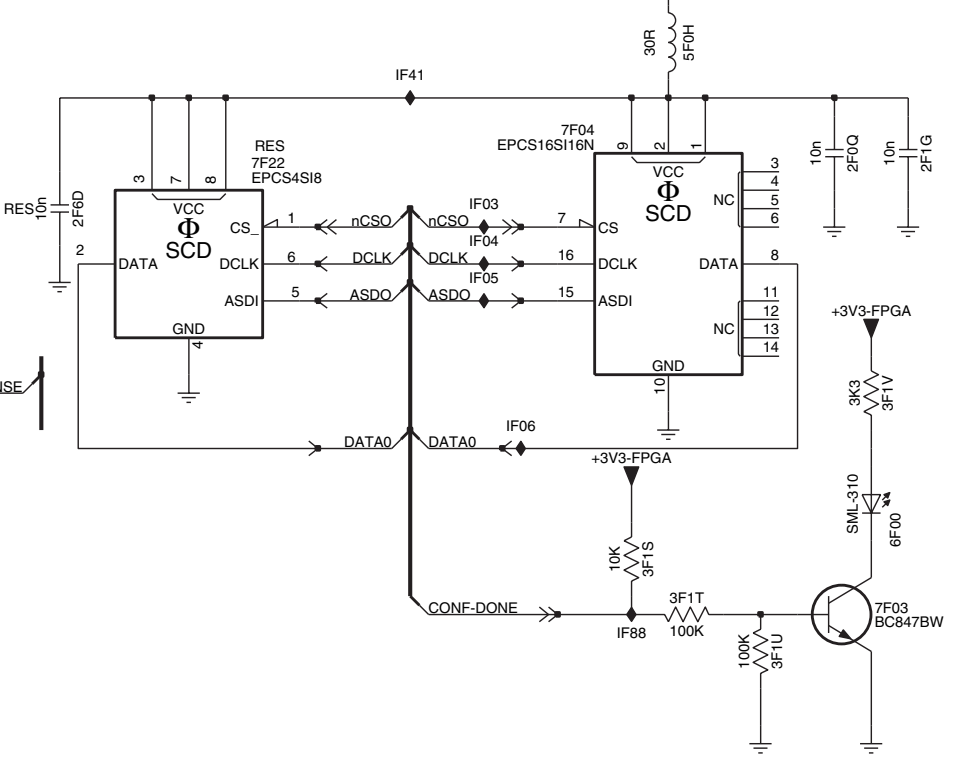
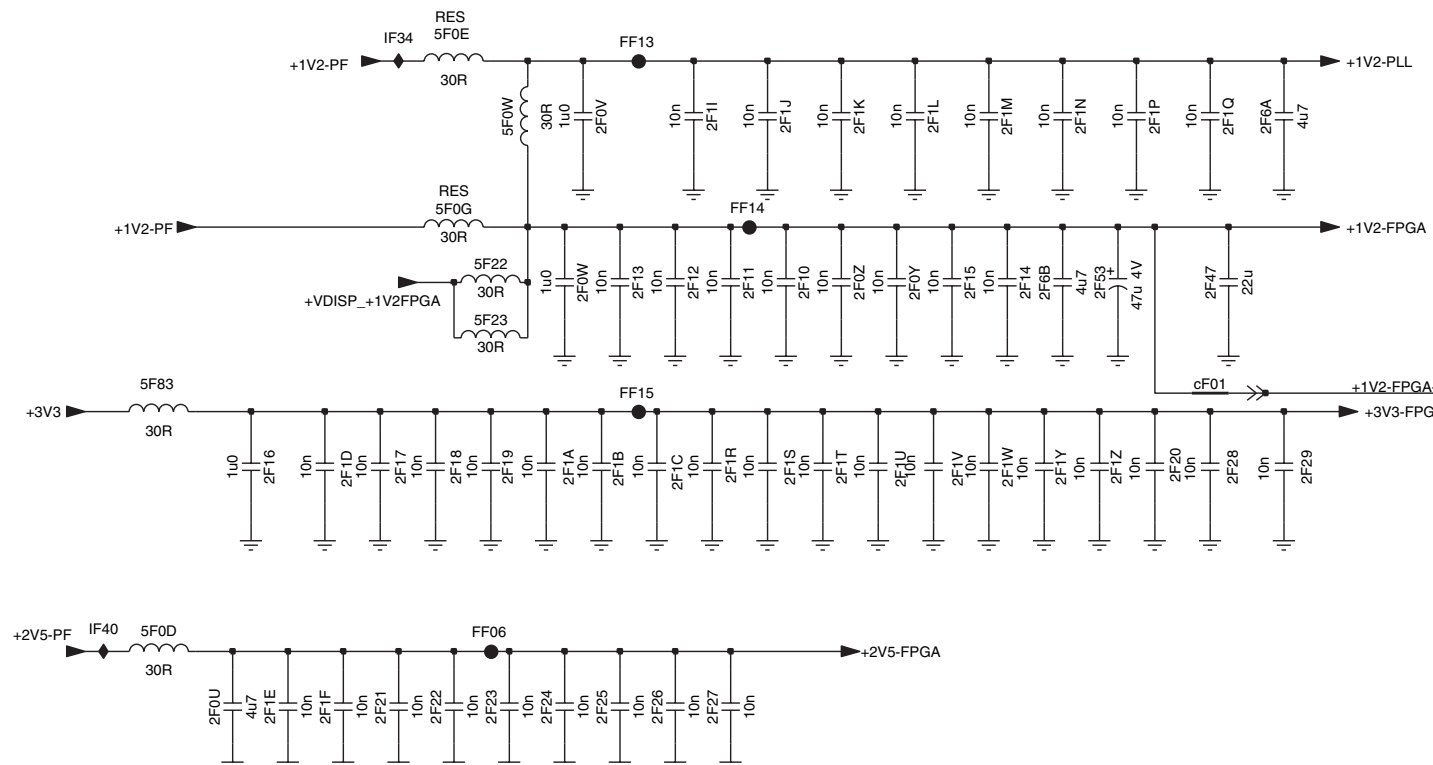
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Q226 E12	Q232 E13	Q236 B9	Q240 D10	Q244 D11	Q248 D12	Q252 D13	Q256 D14	Q260 F10	Q264 B9	Q268 C10	Q272 E10	Q276 E10	Q280 E11	50Q7 F11	9H36 F8	IQ09 B9	
Q227 E12	Q233 E13	Q237 E14	Q241 B10	Q245 D12	Q249 D13	Q253 D14	Q257 D15	Q261 F11	Q265 B9	Q269 D10	Q273 E11	Q277 E10	Q281 E12	50Q8 F11	IQ07 B9	IQ11 F11	
Q228 E12	Q234 E13	Q238 E14	Q242 D11	Q246 D12	Q250 D13	Q254 D14	Q258 D15	Q262 F11	Q266 B10	Q270 D10	Q274 E11	Q278 E11	Q282 D13	50Q3 B9	7V03-C-1	IQ08 C10	



SSB: FPGA 1080P: Power & Control

B8B FPGA 1080P: POWER + CONTROL

B8B

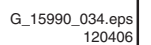


3104 313 6080.4

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120406

- 1F00 E9
- 2F0Q A9
- 2F0T E4
- 2F0U D1
- 2F0V A3
- 2F0W B3
- 2F0Y B4
- 2F0Z B4
- 2F10 B3
- 2F11 B3
- 2F12 B3
- 2F13 B3
- 2F14 B4
- 2F15 B4
- 2F16 C1
- 2F17 C2
- 2F18 C2
- 2F19 C2
- 2F1A C3
- 2F1B C3
- 2F1C C3
- 2F1D C2
- 2F1E D1
- 2F1F D2
- 2F1G A9
- 2F1H F5
- 2F1I A3
- 2F1J A3
- 2F1K A4
- 2F1L A4
- 2F1M A4
- 2F1N A4
- 2F1P A5
- 2F1Q A5
- 2F1R C3
- 2F1S C3
- 2F1T C4
- 2F1U C4
- 2F1V C4
- 2F1W C4
- 2F1Y C4
- 2F1Z C5
- 2F20 C5
- 2F21 D2
- 2F22 D2
- 2F23 D2
- 2F24 D2
- 2F25 D3
- 2F26 D3
- 2F27 D3
- 2F28 C5
- 2F29 C5
- 2F47 B5
- 2F53 B5
- 2F6A A5
- 2F6B B4
- 2F6D B6
- 3F1F E8
- 3F1G F8
- 3F1H F8
- 3F1I F8
- 3F1J E8
- 3F1K F8
- 3F1L E7
- 3F1M E7
- 3F1N E6
- 3F1P E4
- 3F1Q E5
- 3F1R F4
- 3F1S C8
- 3F1T C9
- 3F1U C9
- 3F1V B9
- 3F50 F1
- 3F51 F2
- 3F52 F2
- 3F53 F3
- 3F54 F3
- 3F85 F1
- 3F86 F2
- 3F87 F2
- 3F88 F3
- 3F89 F3
- 5F0D C1
- 5F0E A2
- 5F0G B2
- 5F0H A9
- 5F0W A2
- 5F22 B2
- 5F23 B2
- 5F83 B1
- 6F00 C9
- 6F05 F1
- 6F09 F2
- 6F10 F2
- 6F11 F3
- 6F12 F3
- 7F02-1 F6
- 7F02-2 F5
- 7F03 C9
- 7F04 A8
- 7F22 A7
- FF06 C2
- FF0Y F8
- FF0Z F8
- FF10 F8
- FF11 E8
- FF12 F6
- FF13 A3
- FF14 B3
- FF15 B3
- IF00 E5
- IF01 F4
- IF02 E4
- IF03 B8
- IF04 B8
- IF05 B8
- IF06 B8
- IF34 A2
- IF40 C1
- IF41 A8
- IF88 C8
- cF01 B5

B8C FPGA 1080P: I/O BANKS

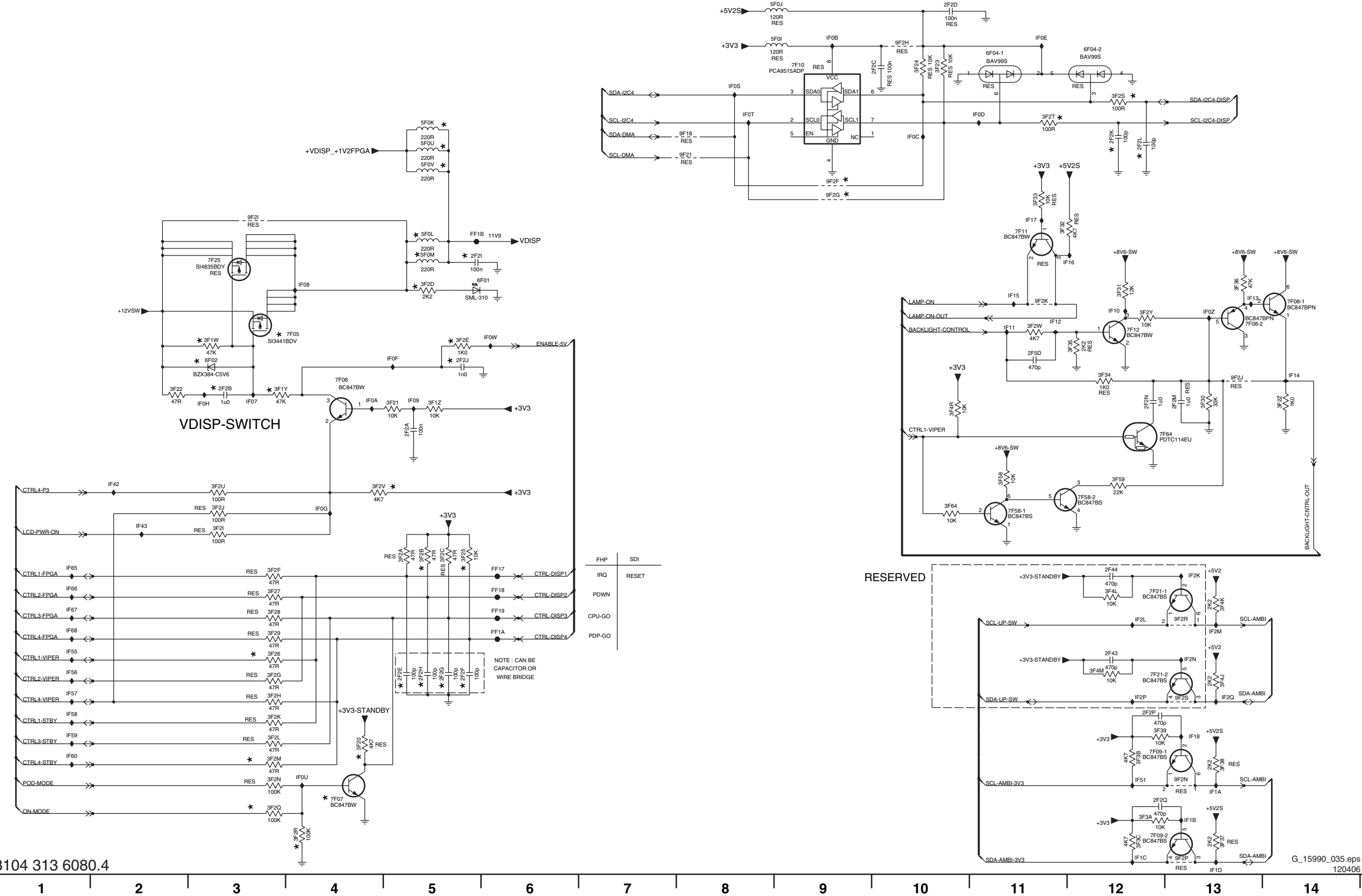


SSB: Display Interfacing

B8D

DISPLAY-INTERFACING

B8D



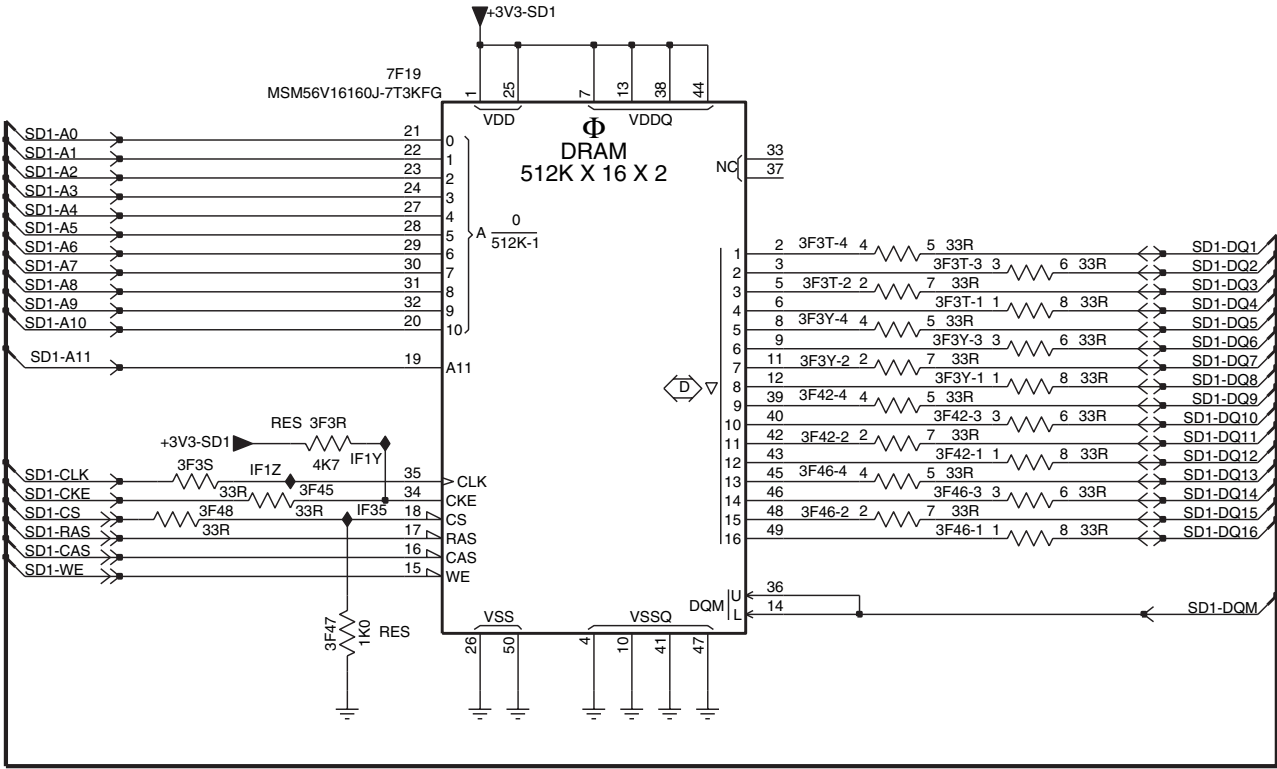
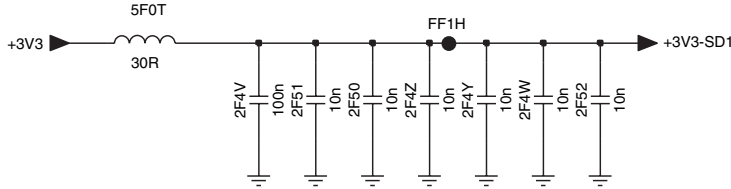
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SSB: FPGA 1080P: SD-RAM

B8F FPGA 1080P: SD-RAM

B8F

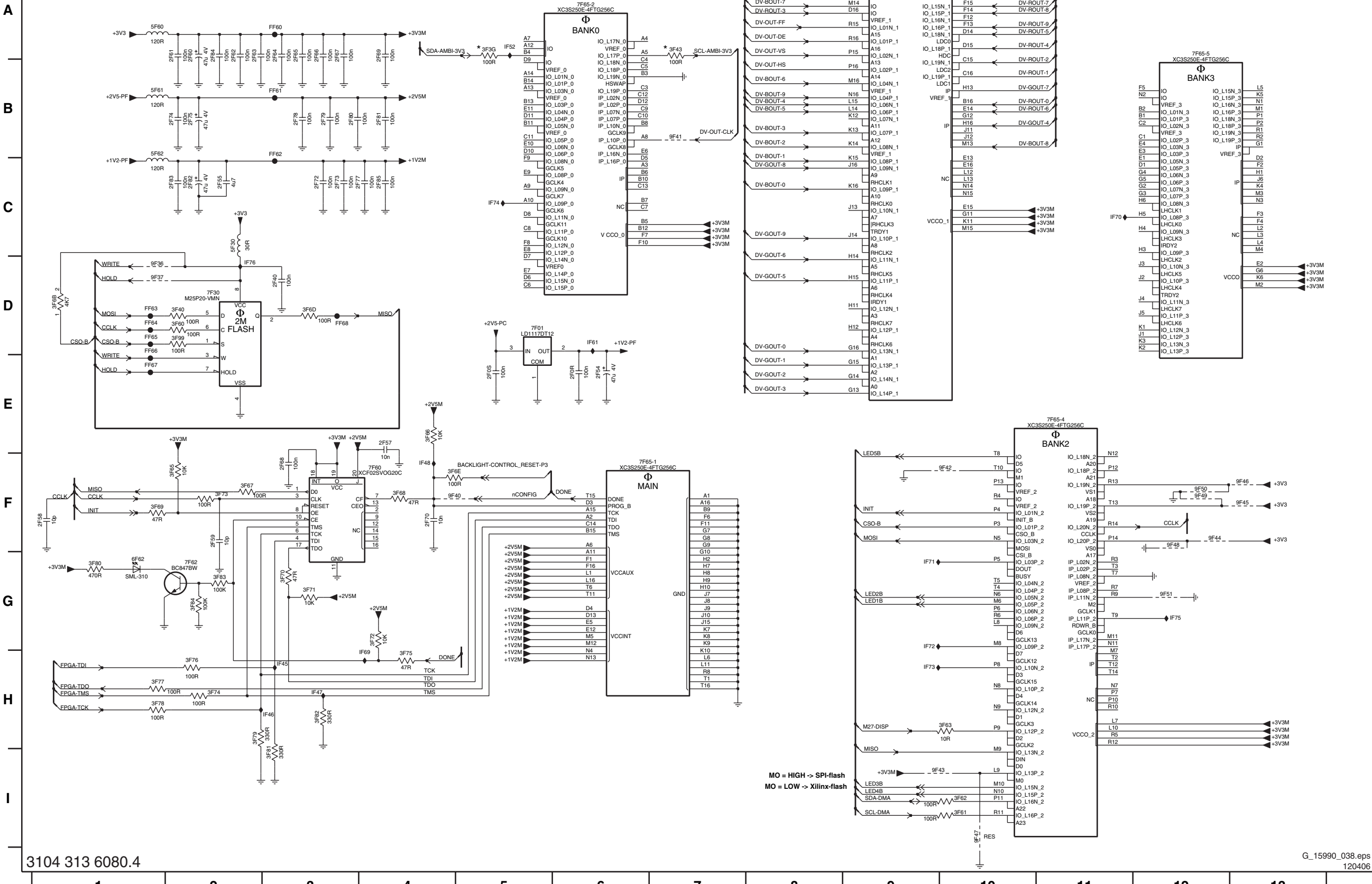


- 2F4V B2
- 2F4W B3
- 2F4Y B3
- 2F4Z B3
- 2F50 B3
- 2F51 B3
- 2F52 B4
- 3F3R D6
- 3F3S D5
- 3F3T-1 C8
- 3F3T-2 C8
- 3F3T-3 C8
- 3F3T-4 C8
- 3F3Y-1 C8
- 3F3Y-2 C8
- 3F3Y-3 C8
- 3F3Y-4 C8
- 3F42-1 D8
- 3F42-2 D8
- 3F42-3 D8
- 3F42-4 C8
- 3F45 D6
- 3F46-1 D8
- 3F46-2 D8
- 3F46-3 D8
- 3F46-4 D8
- 3F47 D6
- 3F48 D5
- 5F0T B2
- 7F19 B6
- FF1H B3
- IF1Y D6
- IF1Z D6
- IF35 D6

SSB: FPGA Ambilight

B8G FPGA AMBILIGHT

B8G



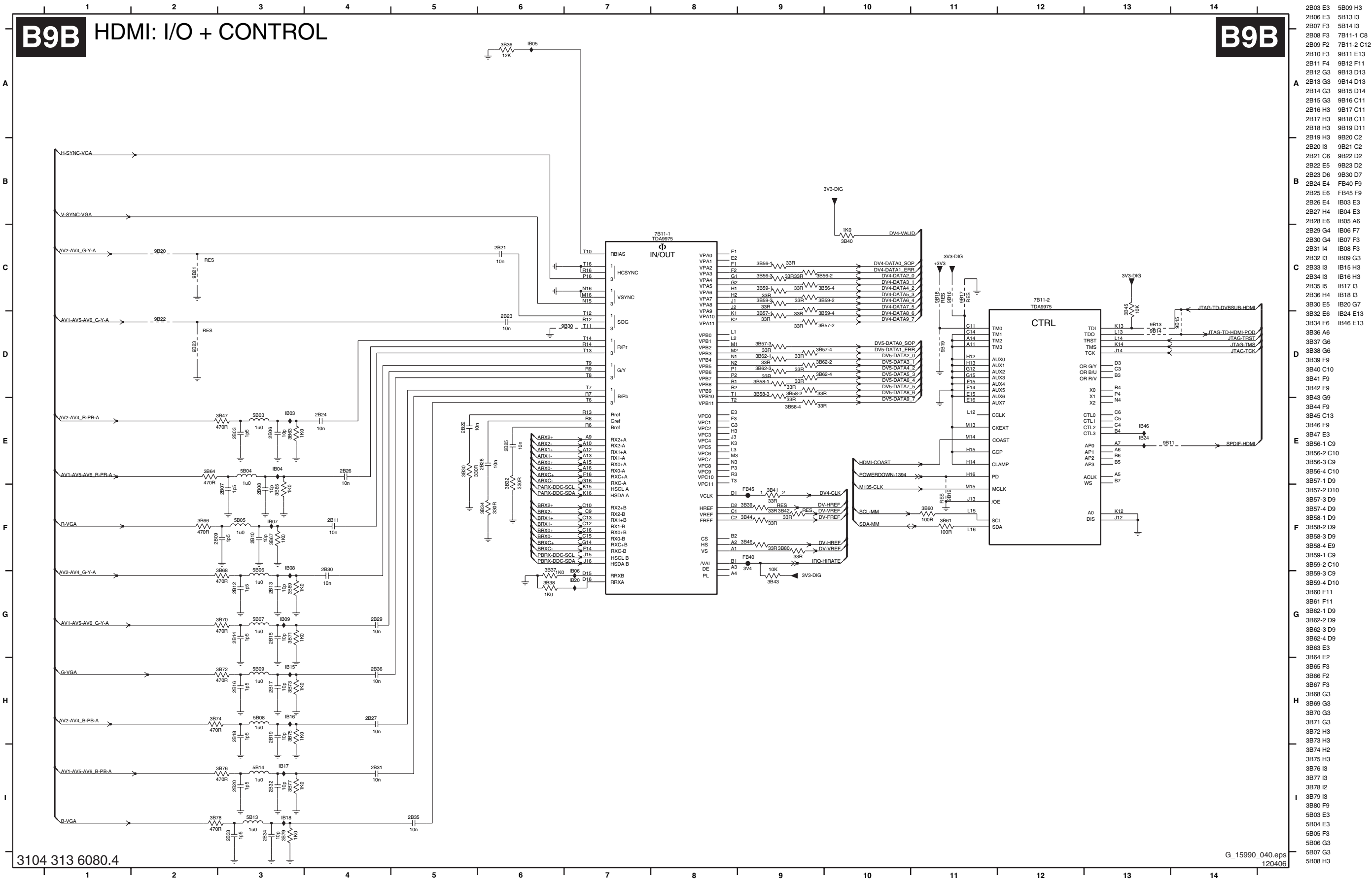
B9A HDMI



SSB: HDMI: I/O Control

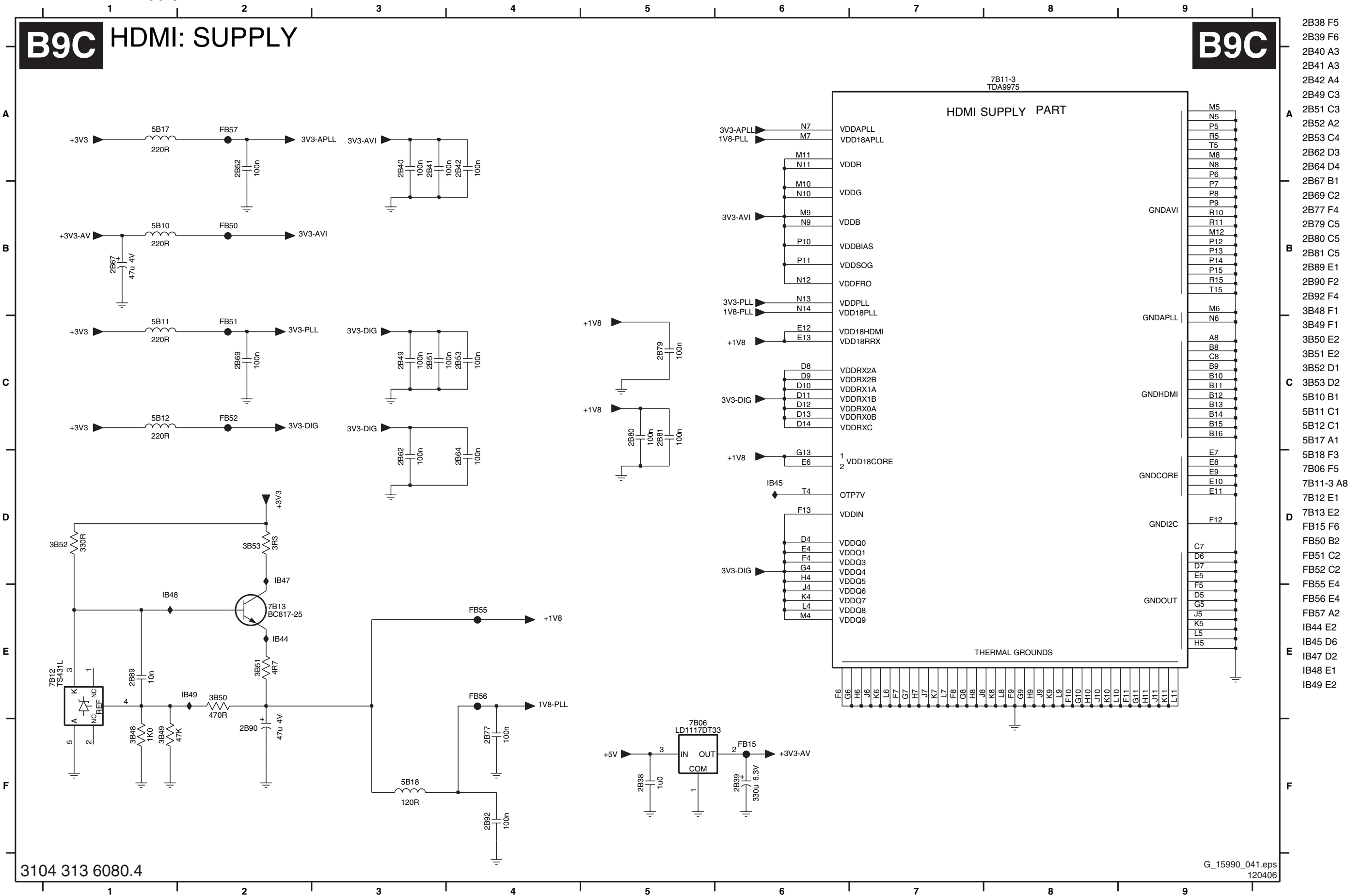
B9B HDMI: I/O + CONTROL

B9B



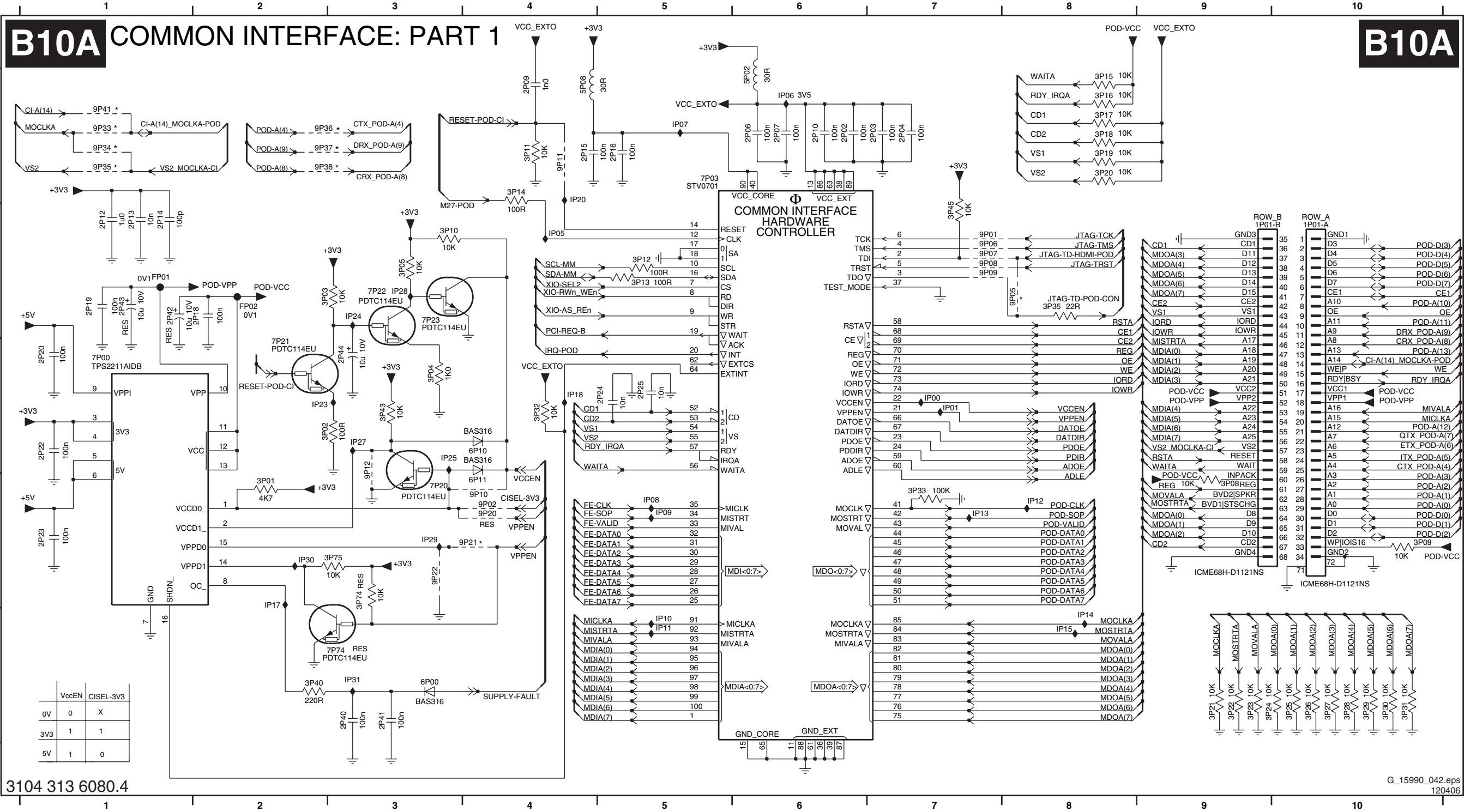
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120406

SSB: HDMI: Supply



SSB: Common Interface: Part 1

1P01-A B10	2P09 A4	2P18 B2	2P40 E3	3P03 B2	3P12 B5	3P19 A8	3P26 E10	3P33 D7	5P02 A6	7P20 D3	9P05 B8	9P12 C3	9P36 A2	IP01 C7	IP11 E5	IP20 A4	IP30 D2
1P01-B B9	2P10 A6	2P19 B1	2P41 E3	3P04 C3	3P13 B5	3P20 A8	3P27 E10	3P35 B8	5P08 A4	7P21 C2	9P06 B7	9P20 D4	9P37 A2	IP05 B4	IP12 D8	IP23 C2	IP31 E3
2P02 A6	2P12 B1	2P20 C1	2P42 B1	3P05 B3	3P14 A4	3P21 E9	3P28 E10	3P40 E2	6P00 E3	7P22 B3	9P07 B7	9P21 D4	9P38 A2	IP06 A6	IP13 D7	IP24 B3	
2P03 A7	2P13 B1	2P22 C1	2P43 B1	3P08 D9	3P15 A8	3P22 E9	3P29 E10	3P43 C3	6P10 C4	7P23 B3	9P08 B7	9P22 D3	9P41 A1	IP07 A5	IP14 E8	IP25 C3	
2P04 A7	2P14 B1	2P23 D1	2P44 C3	3P09 D10	3P16 A8	3P23 E9	3P30 E10	3P45 B7	6P11 D4	7P74 E3	9P09 B7	9P33 A1	FP01 B1	IP08 D5	IP15 E8	IP27 C3	
2P06 A6	2P15 A4	2P24 C4	3P01 D2	3P10 B3	3P17 A8	3P24 E9	3P31 E10	3P74 D3	7P00 C1	9P01 B7	9P10 D4	9P34 A1	FP02 B2	IP09 D5	IP17 D2	IP28 B3	
2P07 A6	2P16 A5	2P25 C5	3P02 C2	3P11 A4	3P18 A8	3P25 E10	3P32 C4	3P75 D3	7P03 A5	9P02 D4	9P11 A4	9P35 A1	IP00 C7	IP10 E5	IP18 C4	IP29 D3	



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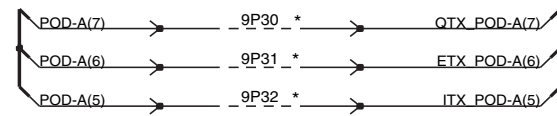
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B10B

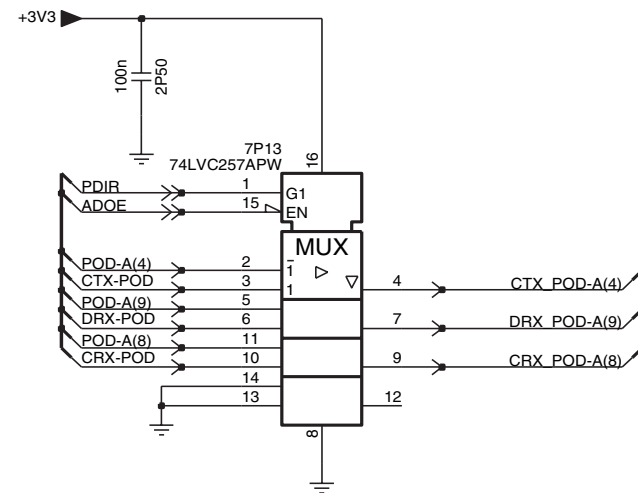
COMMON INTERFACE : PART 2

B10B

A

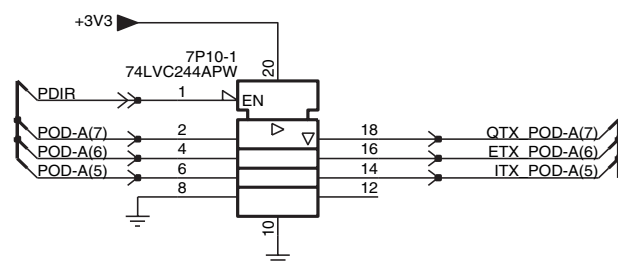


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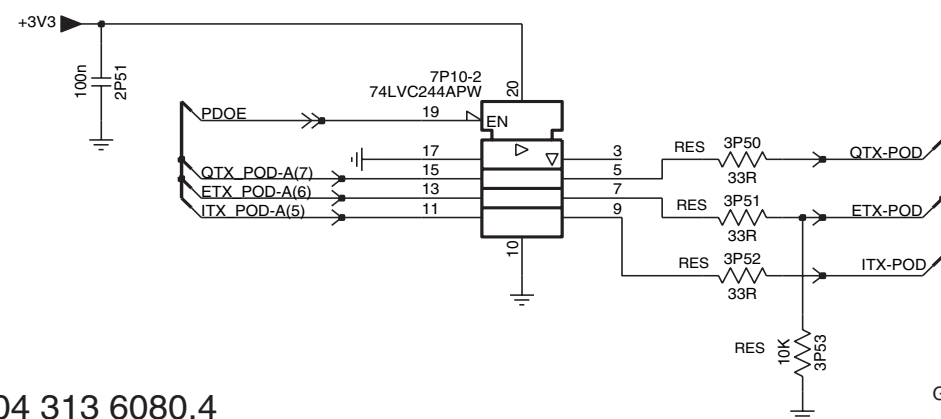


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Personal Notes:

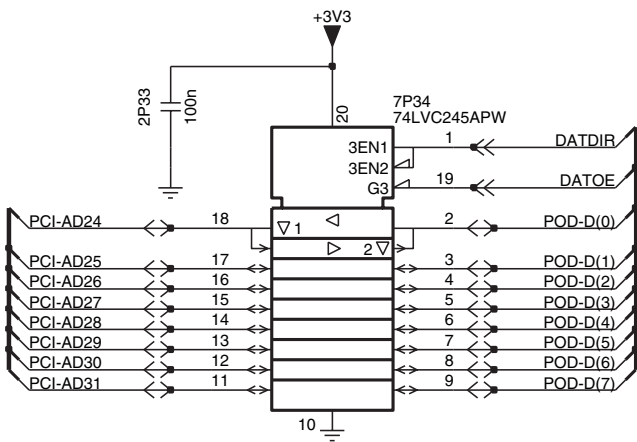
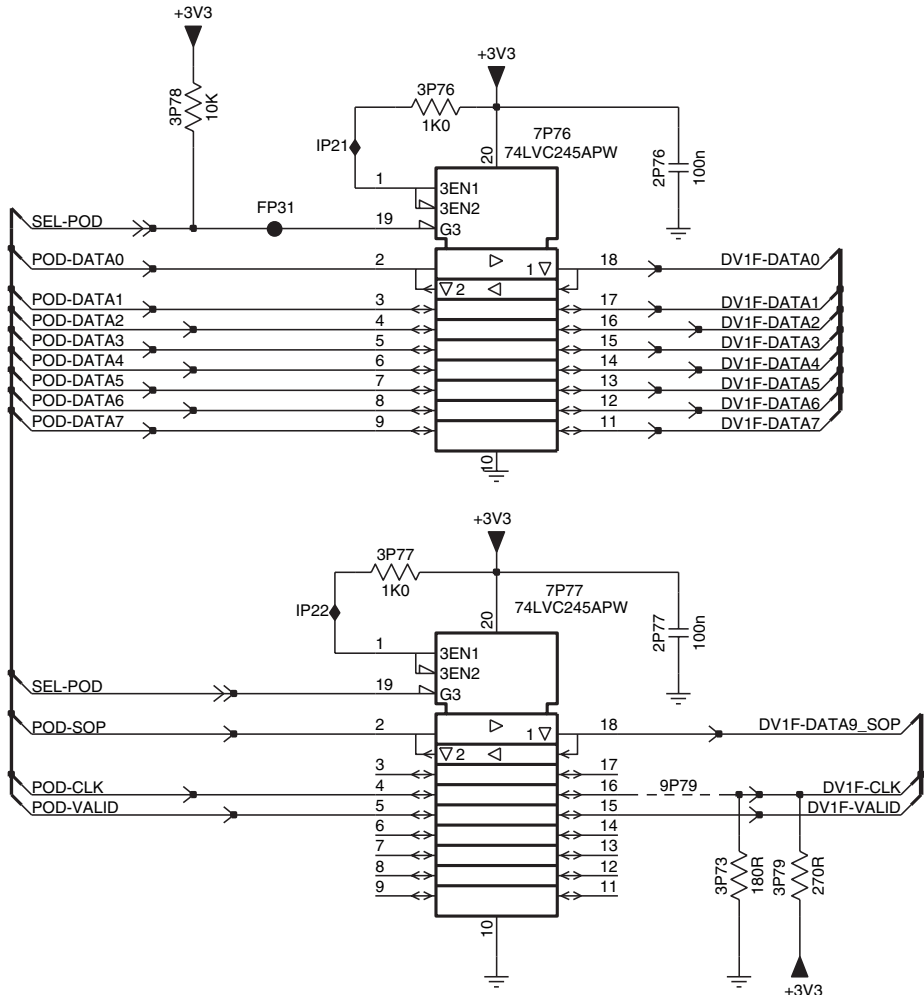
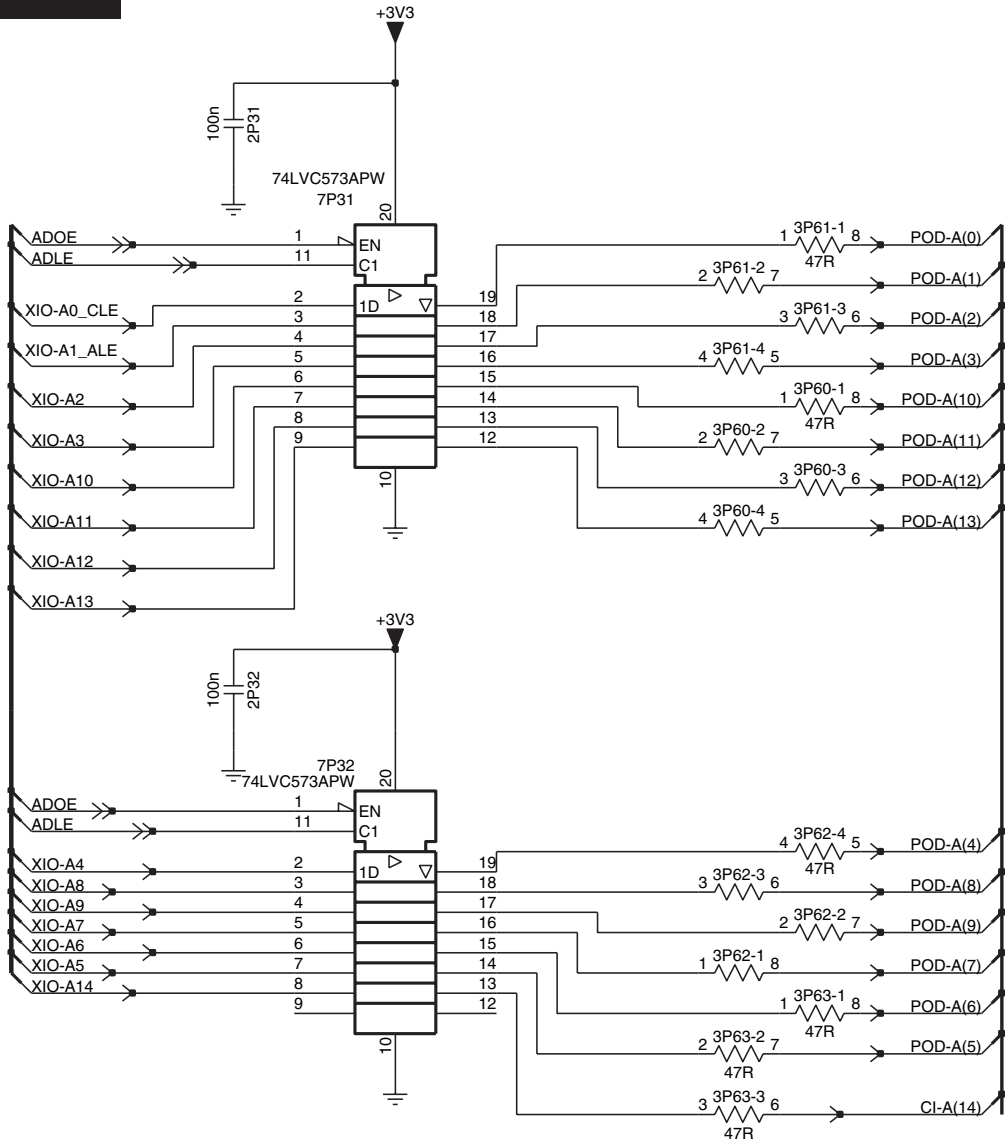
2P50 B1
2P51 E1
3P50 F3
3P51 F3
3P52 F3
3P53 F4
7P10 D2
7P10 E2
7P13 B2
9P30 A2
9P31 A2
9P32 A2

SSB: Common Interface: Part 3

B10C COMMON INTERFACE: PART 3

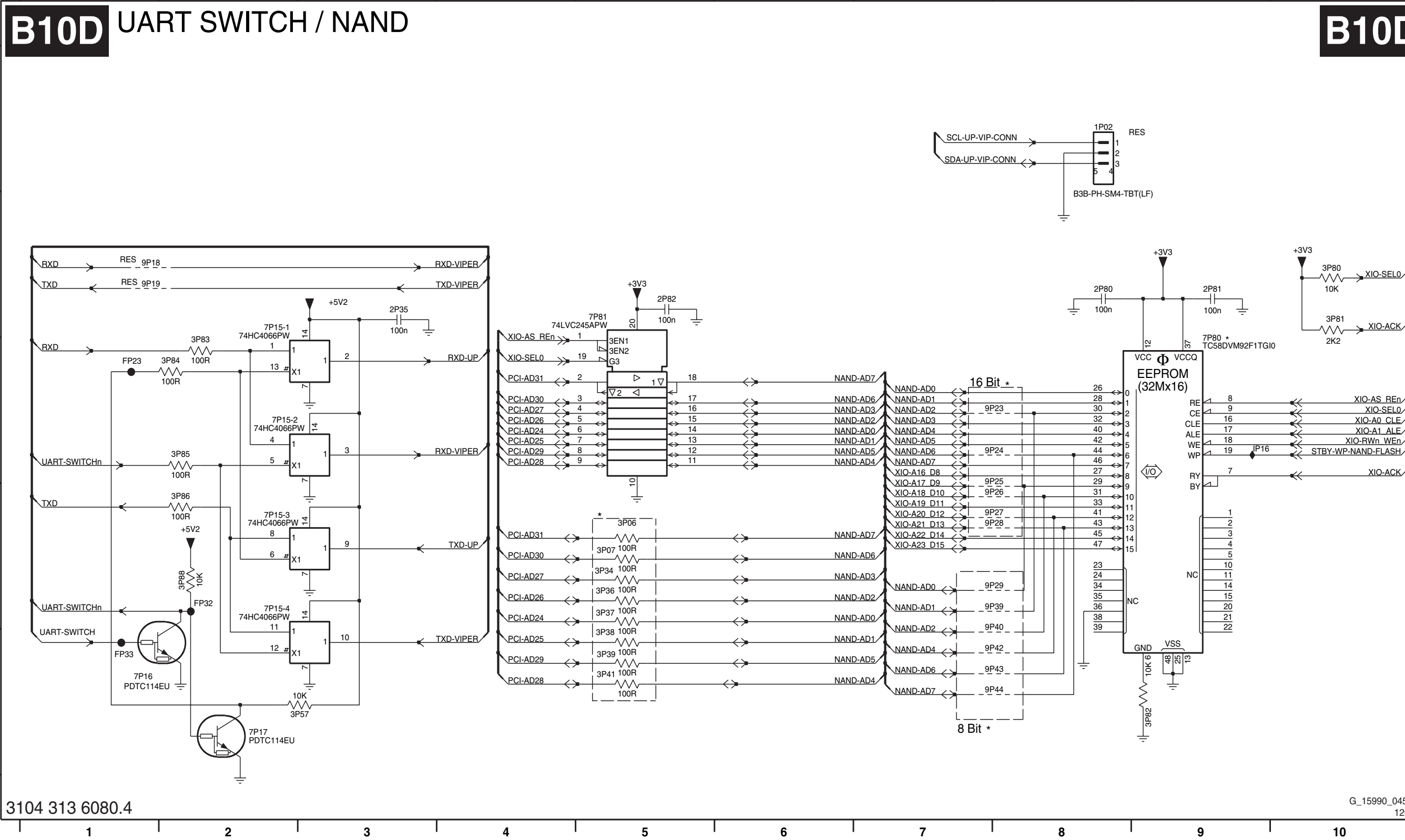
B10C

2P31 A2
2P32 C2
2P33 E2
2P76 B7
2P77 C7
3P60-1 B4
3P60-2 B3
3P60-3 B4
3P60-4 B3
3P61-1 A4
3P61-2 A3
3P61-3 B4
3P61-4 B3
3P62-1 D3
3P62-2 D4
3P62-3 D3
3P62-4 C4
3P63-1 D4
3P63-2 D3
3P63-3 D3
3P73 D8
3P76 A7
3P77 C7
3P78 A6
3P79 D8
7P31 A2
7P32 C2
7P34 E2
7P76 B7
7P77 C7
9P79 D8
FP31 B6
IP21 B6
IP22 C6



SSB: UART Switch / NAND

1P02 A8	2P81 B9	3P07 D5	3P37 D5	3P41 E5	3P81 B10	3P84 C2	3P88 D2	7P15-3 D2	7P17 E2	9P18 B1	9P24 C8	9P27 D8	9P39 D8	9P43 E8	FP32 D2
2P35 B3	2P82 B5	3P34 D5	3P38 E5	3P57 E3	3P82 E9	3P85 C2	7P15-1 B2	7P15-4 D2	7P80 C9	9P19 B1	9P25 D8	9P28 D8	9P40 E8	9P44 E8	FP33 E1
2P80 B8	3P06 D5	3P36 D5	3P39 E5	3P80 B10	3P83 C2	3P86 D2	7P15-2 C2	7P16 E1	7P81 B5	9P23 C8	9P26 D8	9P29 D8	9P42 E8	FP23 C1	IP16 C9



SSB: I/O Part 1

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B11A I/O: PART 1

B11A

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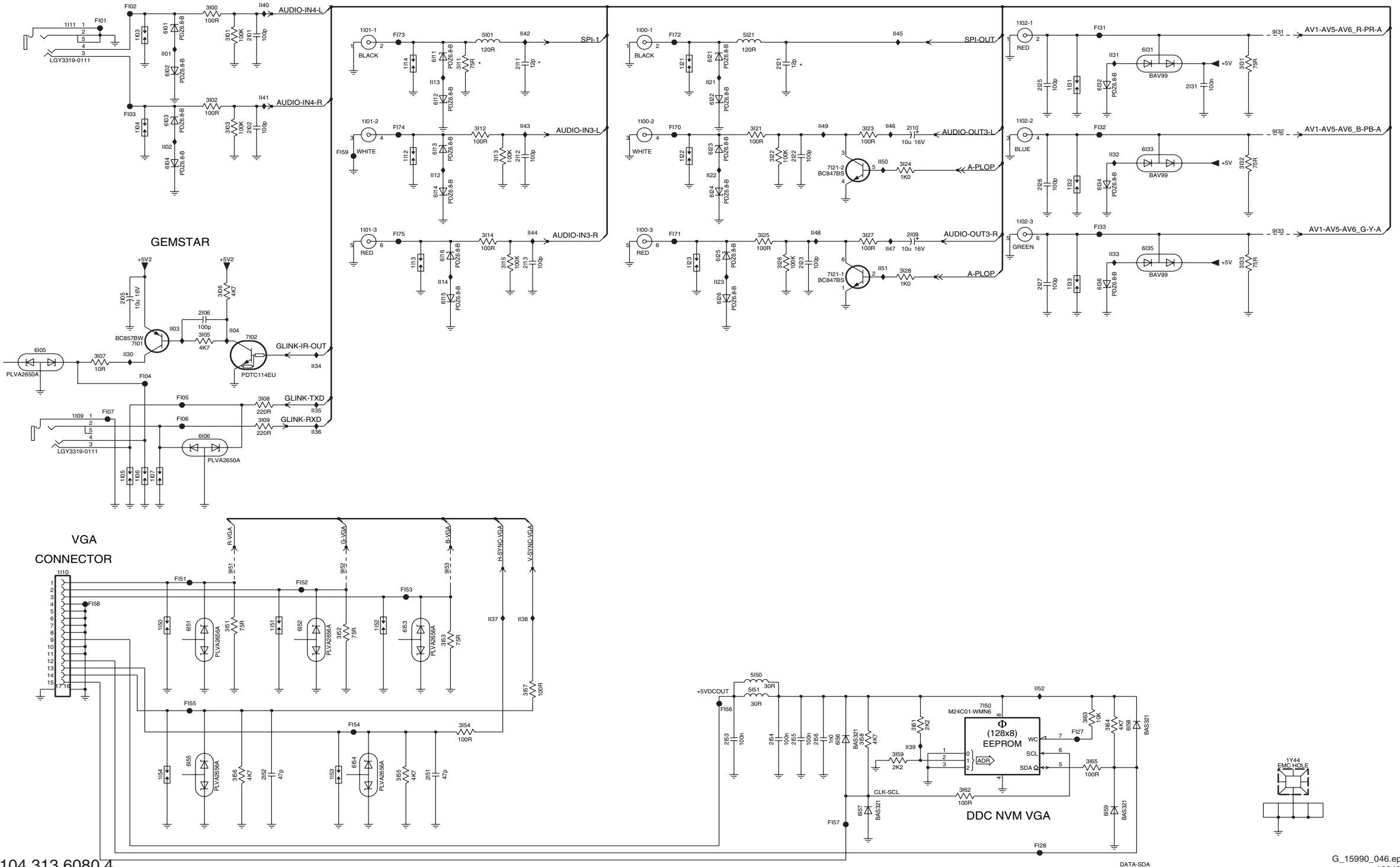
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1100-1 A6	3157 H5	1103 D2
1100-2 B7	3158 H9	1104 D3
1100-3 C6	3159 I9	1112 C4
1101-1 A4	3161 H9	1113 B4
1101-2 B4	3162 I10	1114 D5
1101-3 C4	3163 H11	1121 B7
1102-1 A10	3164 H11	1122 C7
1102-2 B10	3165 I11	1123 D7
1102-3 C10	5101 A5	1130 E2
1103 A2	5121 A7	1131 B11
1104 B2	5150 H8	1132 C11
1105 F2	5151 H8	1133 D11
1106 F2	6101 A2	1134 E3
1107 F2	6102 B2	1135 E3
1109 E1	6103 B2	1136 E3
1110 G1	6104 C2	1137 G5
1111 A1	6105 E1	1138 G5
1112 C4	6106 E2	1139 I9
1113 D4	6111 B4	1140 A3
1114 B4	6112 B5	1141 B3
1121 B7	6113 C4	1142 A5
1122 C7	6114 C5	1143 B5
1123 D7	6115 D5	1144 C5
1131 B11	6116 D5	1145 A9
1132 C11	6121 B7	1146 B9
1133 D11	6122 B7	1147 D9
1150 G2	6123 C7	1148 C8
1151 G3	6124 C7	1149 B8
1152 G4	6125 D7	1150 C9
1153 I4	6126 D7	1151 D9
1154 I2	6131 A11	1152 H10
1154 I2	6132 B11	
201 A3	6133 B11	
202 B3	6134 C11	
2105 D2	6135 C11	
2106 D2	6136 D11	
2109 C9	6151 G2	
2110 B9	6152 G3	
2111 B5	6153 G4	
2112 C5	6154 I4	
2113 D5	6155 I2	
2121 B8	6156 H8	
2122 C8	6157 I9	
2123 D8	6158 H11	
2125 B10	6159 I11	
2126 C10	7101 D2	
2127 D10	7102 D3	
2131 B12	7121-1 D8	
2151 I4	7121-2 C8	
2152 I3	7150 H10	
2153 H7	9131 A13	
2154 H8	9132 B13	
2155 H8	9133 C13	
2156 H8	9151 G3	
3100 A2	9152 G4	
3101 A3	9153 G5	
3102 B2	F101 A1	
3103 B3	F102 A2	
3105 D2	F103 B2	
3106 D2	F104 E2	
3107 E1	F105 E2	
3108 E3	F106 E2	
3109 E3	F107 E1	
3111 B5	F127 H11	
3112 B5	F128 I10	
3113 C5	F131 A11	
3114 C5	F132 B11	
3115 D5	F133 C11	
3121 B8	F151 G2	
3122 C8	F152 G3	
3123 B9	F153 G4	
3124 C9	F154 H4	
3125 C8	F155 H2	
3126 D8	F156 H7	
3127 C9	F157 I8	
3128 D9	F158 G1	
3131 B12	F159 C4	
3132 C12	F170 B7	
3133 D12	F171 C7	
3151 G3	F172 A7	
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3153 G5	F174 B4	
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3155 I4	I101 B2	
3156 I3	I102 B2	

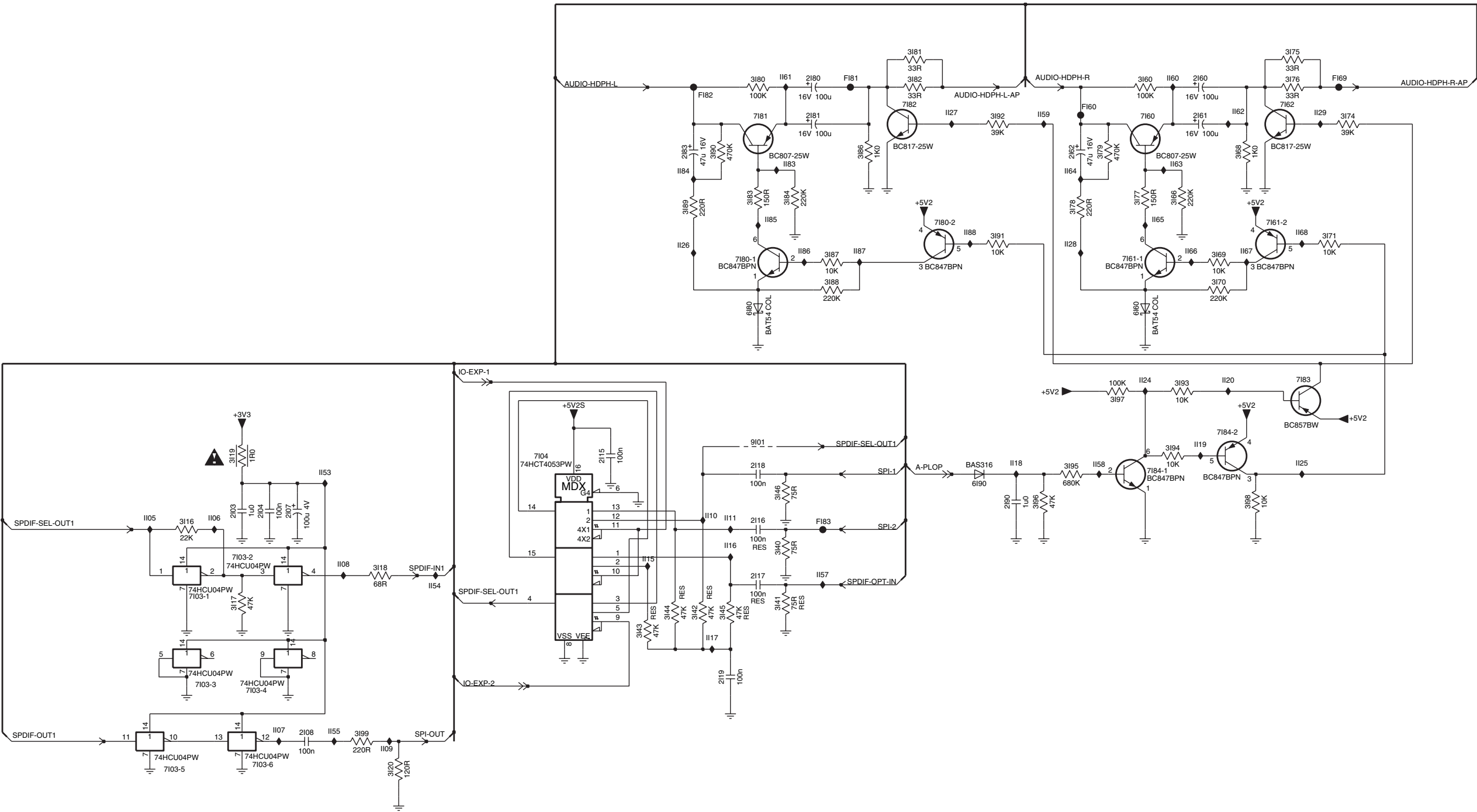
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SSB: I/O Part 2

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2104 E3	2118 E7	2181 B7	3119 E3	3144 F6	3169 C10	3177 C10	3183 C7	3190 B6	3196 E9	6190 E8	7103-6 G3	7180-1 C7	7184-2 D10	F183 E7	I110 E6	I119 D10	I128 C9	I158 E9	I164 B9	I184 B6
2107 E3	2119 F6	2183 B6	3120 G4	3145 F6	3170 C10	3178 C9	3184 C7	3191 C8	3197 D9	7103-1 E2	7104 E5	7180-2 C8	9101 D7	I105 E2	I111 E6	I120 D10	I129 B11	I159 B9	I165 C10	I185 C7
2108 G3	2160 B10	2190 E9	3140 E7	3146 E7	3171 C11	3179 B9	3186 B7	3192 B8	3198 E10	7103-2 E3	7160 B10	7181 B7	F160 B9	I106 E2	I115 E6	I124 D10	I153 E3	I160 B10	I166 C10	I186 C7
2115 E5	2161 B10	3116 E2	3141 F7	3160 B10	3174 B11	3180 B7	3187 C7	3193 D10	3199 G4	7103-3 F2	7161-1 C10	7182 B8	F169 B11	I107 G3	I116 E6	I125 E11	I154 F4	I161 B7	I167 C10	I187 C7
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B11B I/O: PART 2

B11B



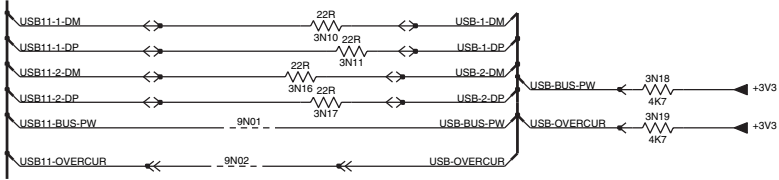
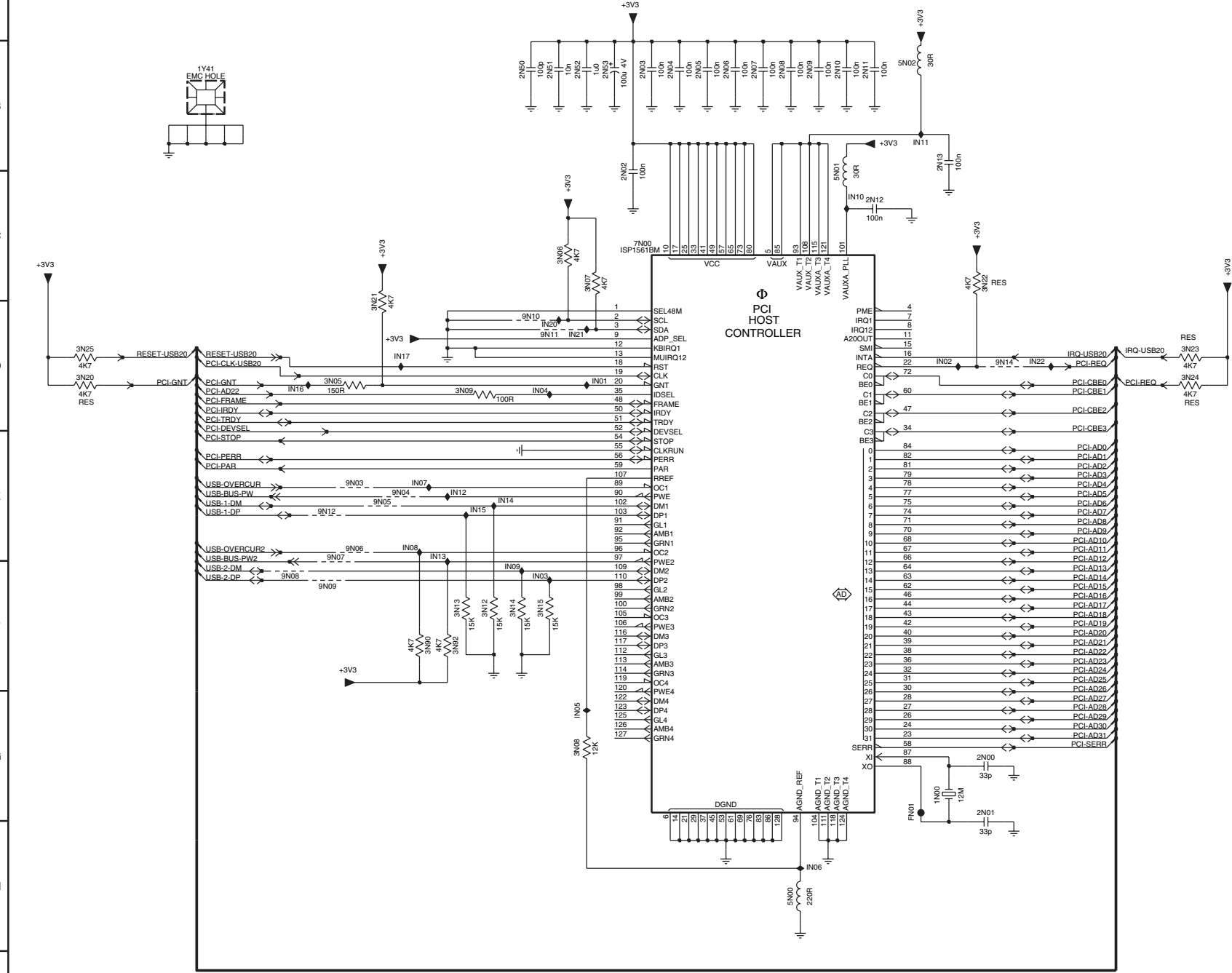
SSB: USB 2.0

B12A USB 2.0

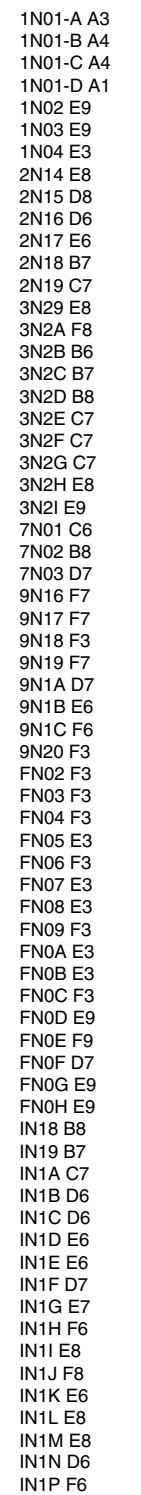
B12A

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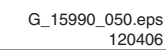
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2N07 B6
2N08 B6
2N09 B6
2N10 B6
2N11 B7
2N12 C7
2N13 B7
2N50 B4
2N51 B4
2N52 B4
2N53 B5
3N05 D3
3N06 C4
3N07 C5
3N08 G4
3N09 D4
3N10 G12
3N11 H12
3N12 F4
3N13 F4
3N14 F4
3N15 F4
3N16 H12
3N17 H12
3N18 H14
3N19 H14
3N20 D1
3N21 D3
3N22 C8
3N23 D9
3N24 D9
3N25 D1
3N90 F3
3N92 F3
5N00 H6
5N01 C6
5N02 B7
7N00 C5
9N01 H12
9N02 H12
9N03 E3
9N04 E3
9N05 E3
9N06 E3
9N07 E3
9N08 F2
9N09 F3
9N10 D4
9N11 D4
9N12 E3
9N14 D8
FN01 G7
IN01 D5
IN02 D7
IN03 F4
IN04 D4
IN05 G4
IN06 H6
IN07 E3
IN08 E3
IN09 F4
IN10 C7
IN11 B7
IN12 E4
IN13 E3
IN14 E4
IN15 E4
IN16 D2
IN17 D3
IN20 D4
IN21 D4
IN22 D8



B12B



1000 C8	2002 H3	2006 C12	2012 G11	2016 C8	2020 G13	2024 G12	2028 G11	3003 C7	3007 D1	3011 D8	3021 A8	3025 B9	5000 G11	7000-1 B3	F002 B10	F006 E8	I002 C7	I006 C9	I010 C8	I014 F8
1010 A10	2003 H3	2007 C11	2013 B9	2017 H11	2021 G13	2025 G12	3000 C8	3004 E8	3008 D1	3012 D8	3022 A8	3026 B9	5001 H11	7000-2 H7	F003 B10	F007 F8	I003 H3	I007 D11	I011 E7	I015 C7
2000 D8	2004 A11	2010 E3	2014 B9	2018 H11	2022 G13	2026 G12	3001 C7	3005 E8	3009 A11	3013 D9	3023 A9	3027 C9	6000 F8	9016 C9	F004 C10	F008 E3	I004 G11	I008 A11	I012 F7	
2001 D8	2005 A12	2011 G11	2015 B10	2019 G13	2023 G12	2027 G12	3002 D3	3006 F8	3010 C11	3014 D9	3024 A9	3028 C9	6001 F8	F001 A10	F005 C10	I001 E7	I005 A9	I009 H11	I013 F7	

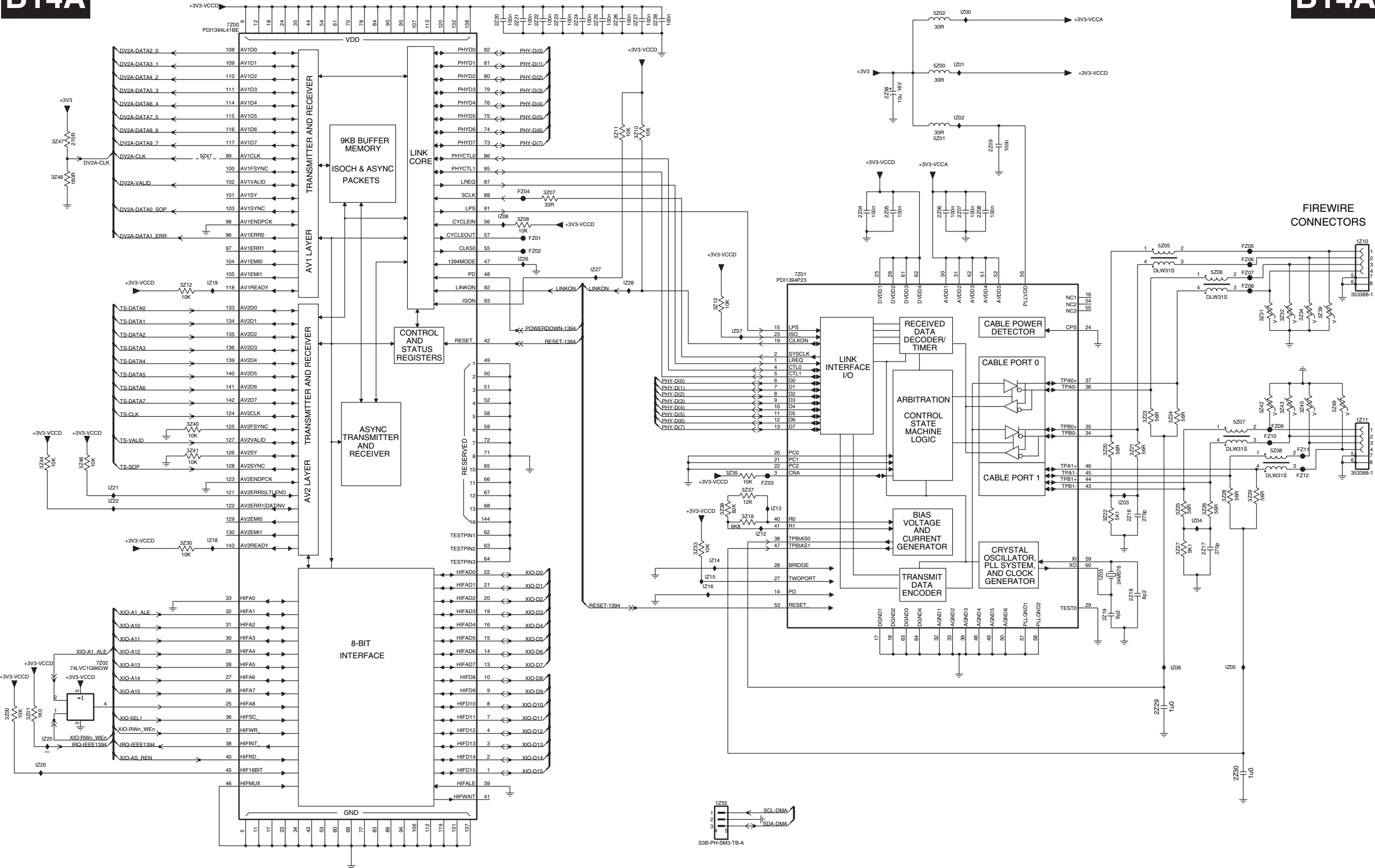


SSB: Firewire 1394: Main

B14A

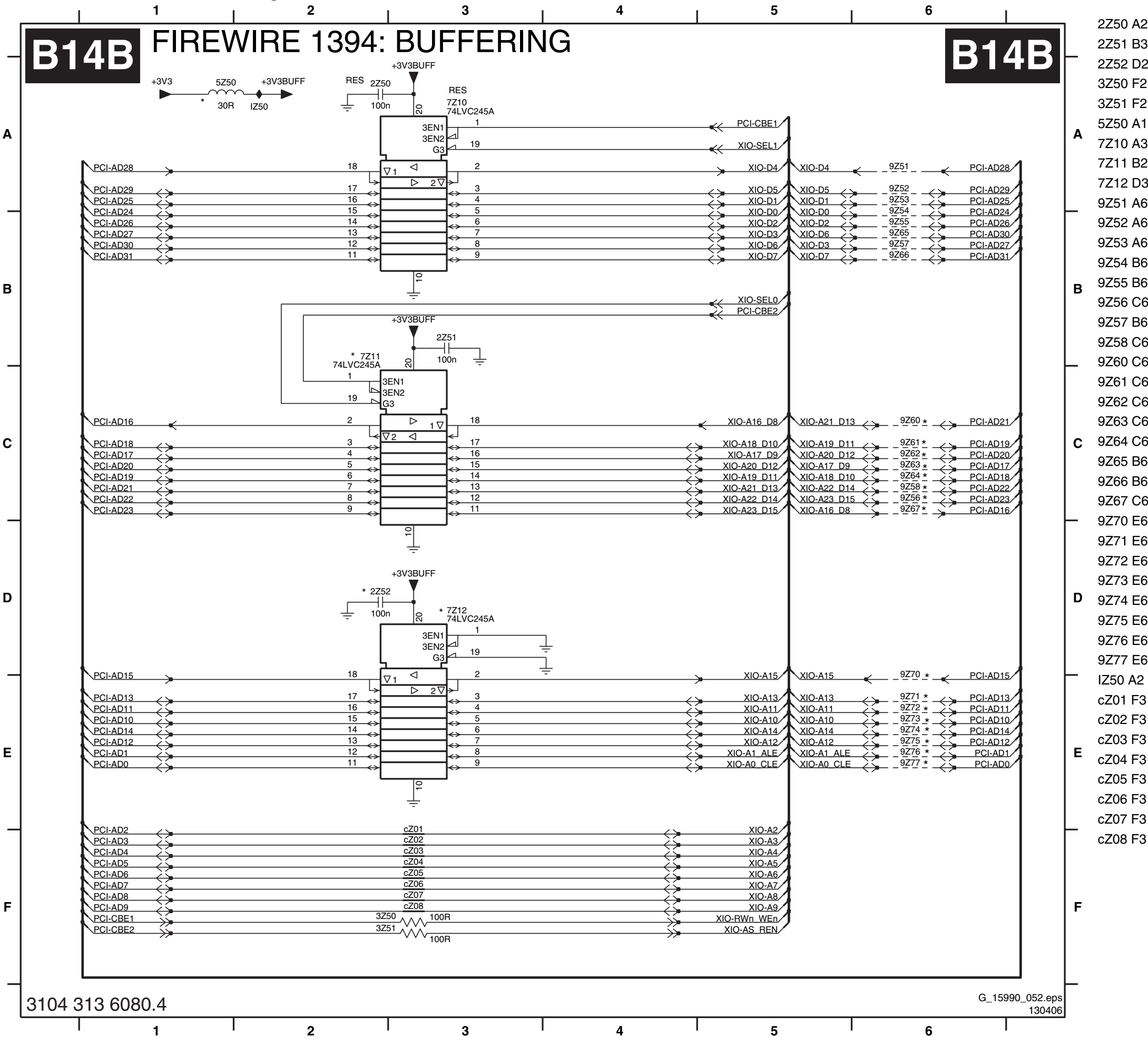
FIREWIRE 1394: MAIN

B14A



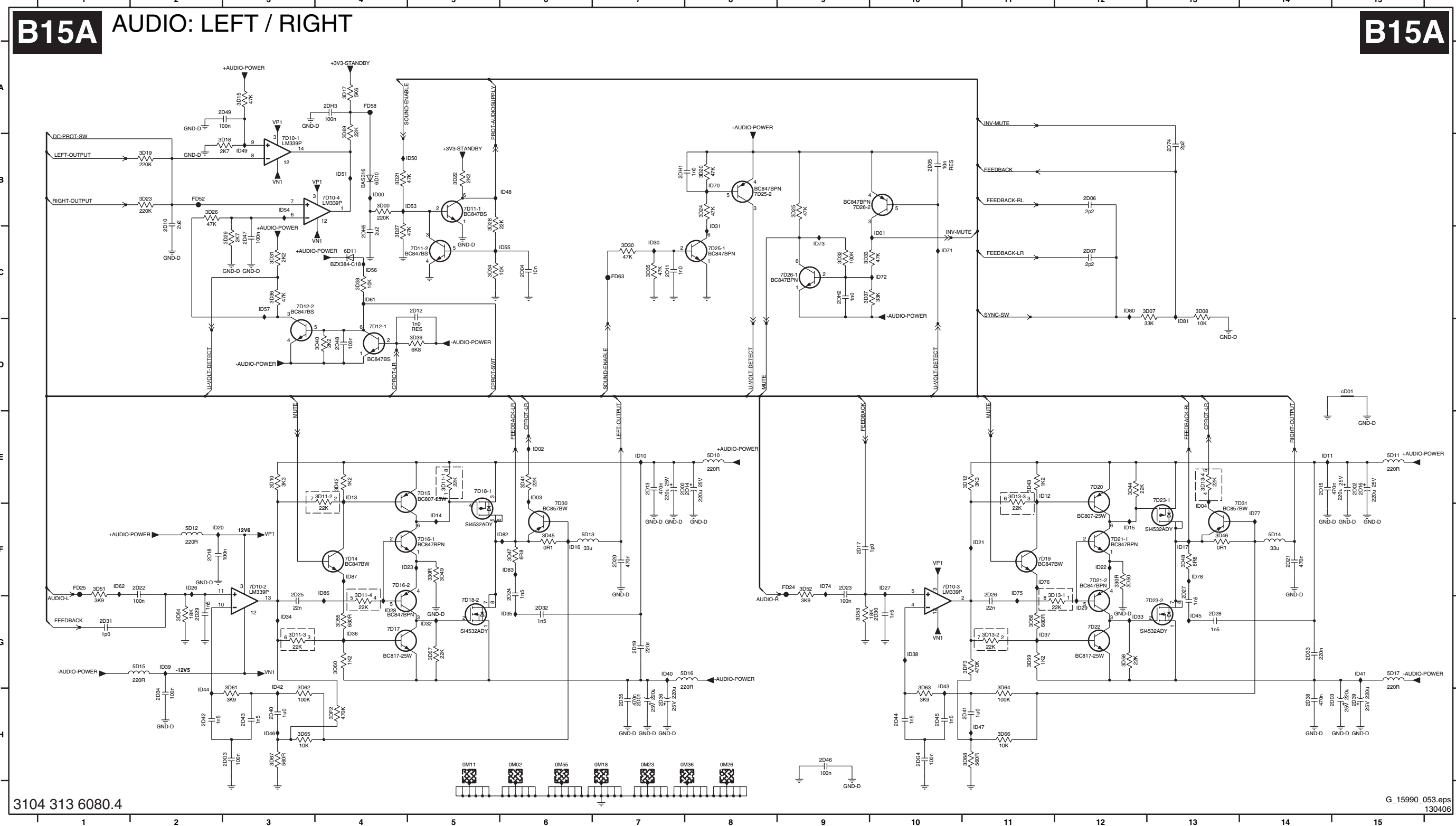
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- I219 C2
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- I228 C7
- I204 F13
- I205 G13
- I207 D8
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- I215 F8
- I216 G8
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- I221 E1
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- I228 C7
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- I210 C14
- I211 E14
- I255 I8
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- I208 B11
- I212 B11
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- I219 C2
- I220 H1
- I221 E1
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- I225 H1
- I226 C6
- I227 C6
- I228 C7
- I204 F13
- I205 G13
- I207 D8
- I208 C5
- I212 F8
- I215 F8
- I216 G8
- I218 F2
- I219 C2
- I220 H1
- I221 E1
- I222 F1
- I225 H1
- I226 C6
- I227 C6
- I228 C7

SSB: Firewire 1394: Buffering



- 2Z50 A2
- 2Z51 B3
- 2Z52 D2
- 3Z50 F2
- 3Z51 F2
- 5Z50 A1
- 7Z10 A3
- 7Z11 B2
- 7Z12 D3
- 9Z51 A6
- 9Z52 A6
- 9Z53 A6
- 9Z54 B6
- 9Z55 B6
- 9Z56 C6
- 9Z57 B6
- 9Z58 C6
- 9Z60 C6
- 9Z61 C6
- 9Z62 C6
- 9Z63 C6
- 9Z64 C6
- 9Z65 B6
- 9Z66 B6
- 9Z67 C6
- 9Z70 E6
- 9Z71 E6
- 9Z72 E6
- 9Z73 E6
- 9Z74 E6
- 9Z75 E6
- 9Z76 E6
- 9Z77 E6
- IZ50 A2
- cZ01 F3
- cZ02 F3
- cZ03 F3
- cZ04 F3
- cZ05 F3
- cZ06 F3
- cZ07 F3
- cZ08 F3

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2001 H7	2D12 C5	2D21 F14	2D30 G10	2D40 H3	2D49 A3	3D07 C13	3D13-2 G11	3D22 B5	3D31 C3	3D40 D4	3D49 F5	3D58 G12	3D67 H3	5D14 F4	7D10-4 B4	7D16-2 F4	7D23-2 G12	F2D5 B2	ID11 E14	ID22 F12	ID33 G12	ID42 G13	ID51 B4	ID71 C10	ID81 D13
2D02 E15	2D13 E7	2D22 F2	2D31 G1	2D41 H1	2D74 B13	3D08 C13	3D13-3 E11	3D23 B2	3D32 C9	3D41 E6	3D50 F12	3D59 G11	3D68 H11	5D15 G2	7D11-1 B5	7D18-1 E5	7D25-1 C8	F2D5 A4	ID12 E11	ID23 F5	ID34 G3	ID43 H10	ID53 B5	ID72 C10	ID82 F6
2D03 H14	2D14 E8	2D23 F9	2D32 G6	2D42 H2	2D73 H3	3D10 E3	3D13-4 E13	3D24 B8	3D32 C9	3D42 E4	3D51 F1	3D60 G4	3D69 A4	5D16 G8	7D11-2 C5	7D18-2 G5	7D25-2 B8	F2D6 C7	ID13 E4	ID24 F2	ID35 G6	ID44 H2	ID54 B3	ID73 C9	ID83 F6
2D04 C6	2D15 E4	2D24 F6	2D33 G14	2D43 H3	2D74 H10	3D11-1 E5	3D15 A3	3D25 B9	3D34 C5	3D43 E11	3D52 F9	3D61 H3	3D72 H4	5D17 G15	7D12-1 D4	7D19 F11	7D26-1 C9	ID00 B4	ID14 F5	ID27 F10	ID36 G4	ID45 H3	ID55 C6	ID74 F9	ID84 F4
2D05 B10	2D16 E15	2D25 G3	2D34 H2	2D44 H10	2D71 H7	3D11-2 E4	3D17 A4	3D26 B2	3D35 C7	3D44 E12	3D53 G9	3D62 H3	3D73 G11	5D18 B4	7D12-2 C3	7D20 E12	7D26-2 B10	ID01 C10	ID15 F12	ID28 G4	ID37 G11	ID46 H3	ID56 C6	ID75 F11	ID86 F4
2D06 B11	2D17 F9	2D26 H2	2D35 G10	2D45 H12	2D72 H10	3D11-3 C3	3D18 A4	3D27 B1	3D36 C7	3D45 E13	3D54 F12	3D63 H4	3D74 G12	5D19 G15	7D11-3 F12	7D18-3 E6	7D26-3 B10	ID02 C9	ID16 F12	ID29 G5	ID38 G12	ID47 H3	ID57 C9	ID76 F11	ID87 F4
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2D10 B2	2D19 G7	2D28 G13	2D38 H14	2D47 C3	2D75 C4	3D12 E11	3D20 B8	3D29 C3	3D38 C4	3D46 F6	3D56 G11	3D65 H3	3D76 F3	7D10-2 F3	7D16-1 F5	7D22 G12	F2D4 F9	ID04 F13	ID20 F12	ID31 B8	ID40 G7	ID49 B6	ID62 F1	ID78 F13	ID89 F4



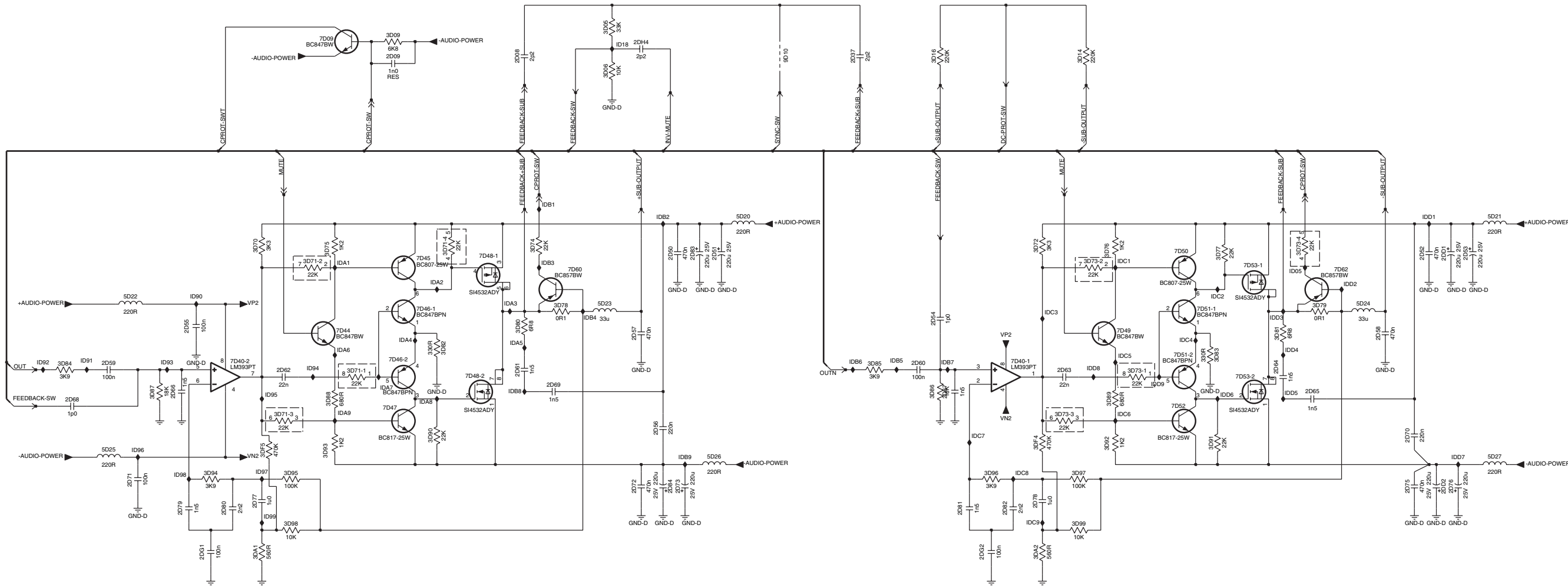
SSB: Audio: Subwoofer

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2D09 B4	2D54 E10	2D60 E9	2D66 E2	2D72 F7	2D79 G2	2D81 D15	3D06 B6	3D71-2 D3	3D73-3 F11	3D78 E6	3D84 E1	3D90 F5	3D96 F10	3DF4 F11	5D24 E14	7D40-2 E3	7D48-1 D5	7D52 F12	ID05 D13	ID94 E3	IDA1 D4	IDA7 E4	IDB4 E6	IDC1 D11	IDD4 E13		
2D37 B9	2D55 E2	2D61 E6	2D67 E10	2D73 F7	2D80 G3	2D82 F15	3D09 B4	3D71-3 F3	3D73-4 D13	3D79 E13	3D85 E9	3D91 F12	3D97 F11	3DF5 F3	5D25 F1	7D44 E4	7D48-2 E5	7D53-1 D13	ID18 B7	ID95 E3	IDA2 D5	IDA8 F5	IDB5 E9	IDC2 D12	IDD5 E13		
2D50 D7	2D56 F7	2D62 E3	2D68 F1	2D75 F14	2D81 G10	2D81 G2	3D14 B11	3D71-4 D5	3D74 D6	3D80 E6	3D86 E10	3D92 F11	3D98 G3	5D20 D8	5D26 F7	7D45 D4	7D49 E11	7D53-2 E13	ID90 D2	ID96 F2	IDA3 E5	IDA9 F4	IDB6 E9	IDC3 E11	IDD6 E12		
2D51 D7	2D57 E7	2D63 E11	2D69 E6	2D76 F15	2D82 G10	2D82 G10	3D16 B10	3D72 D11	3D75 D4	3D81 E13	3D87 E2	3D93 F4	3D99 G11	5D21 D15	5D27 F15	7D46-1 E4	7D50 D12	7D60 D6	ID91 E1	ID97 F3	IDA4 E4	IDB1 D6	IDB7 E10	IDC4 E12	IDD1 D14	IDD7 F15	
2D52 D14	2D58 E14	2D64 E13	2D70 F14	2D77 F3	2D83 D7	2D84 B7	3D70 D3	3D73-1 E12	3D76 D11	3D82 E5	3D88 E4	3D94 F2	3DA1 G3	5D22 E2	7D09 B4	7D46-2 E4	7D51-1 E12	7D62 D14	ID92 E1	ID98 F2	IDA5 E5	IDB2 D7	IDB8 E5	IDC5 E11	IDD2 D14	IDD8 E11	

B15B

AUDIO: SUBWOOFER

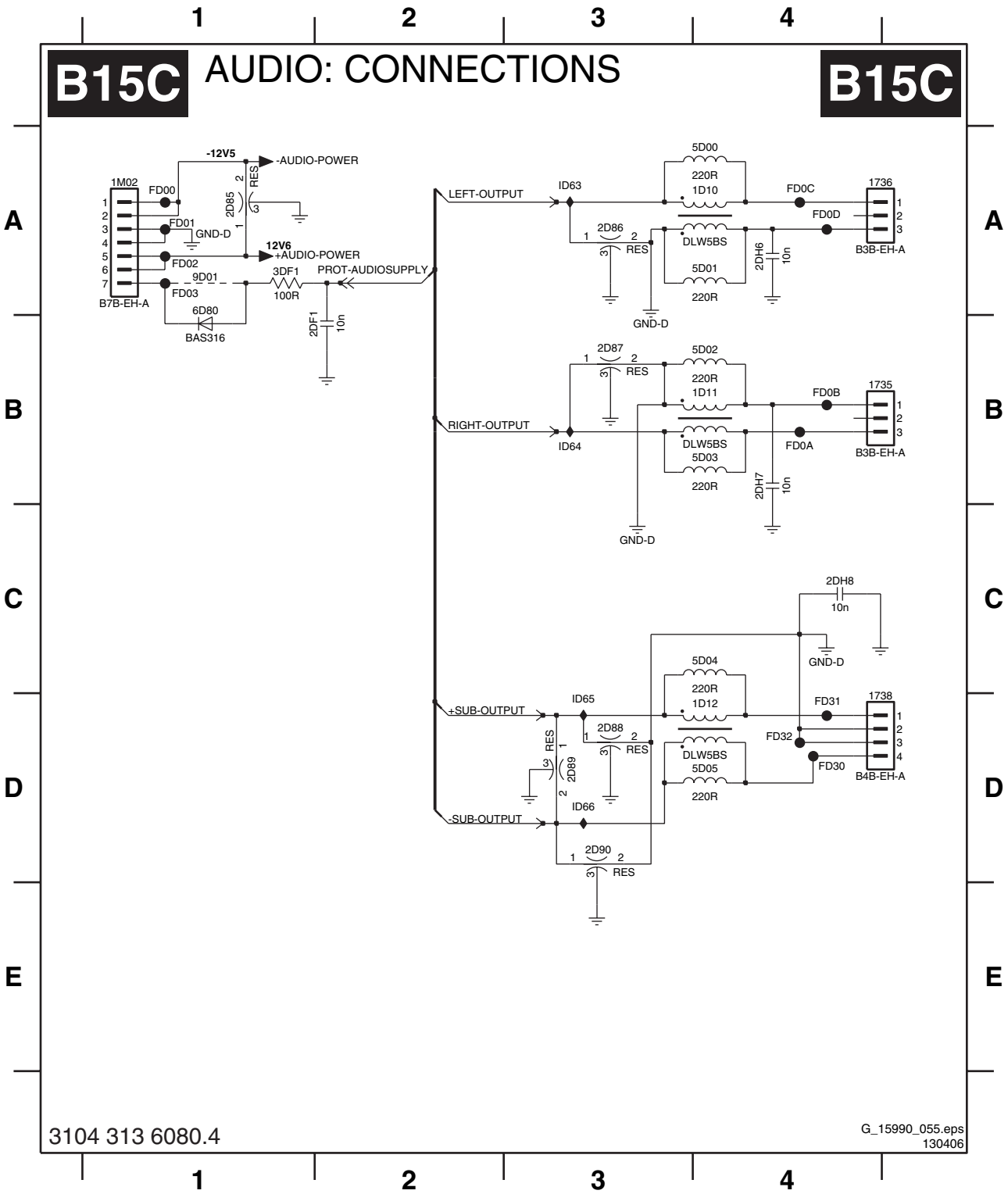
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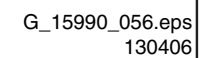
SSB: Audio: Connections



Personal Notes:

- 1735 B4
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- 1738 D4
- 1D10 A4
- 1D11 B4
- 1D12 D4
- 1M02 A1
- 2D85 A1
- 2D86 A3
- 2D87 B3
- 2D88 D3
- 2D89 D3
- 2D90 D3
- 2DF1 B2
- 2DH6 A4
- 2DH7 B4
- 2DH8 C4
- 3DF1 A1
- 5D00 A4
- 5D01 A4
- 5D02 B4
- 5D03 B4
- 5D04 C4
- 5D05 D4
- 6D80 A1
- 9D01 A1
- FD00 A1
- FD01 A1
- FD02 A1
- FD03 A1
- FD0A B4
- FD0B B4
- FD0C A4
- FD0D A4
- FD30 D4
- FD31 D4
- FD32 D4
- ID63 A3
- ID64 B3
- ID65 D3
- ID66 D3

B15D AUDIO: CENTRE INPUT / SW FILTER



SSB: Miscellaneous Part 1

B16A

MISCELLANEOUS: PART 1

B16A

A

B

C

D

E

F

A

B

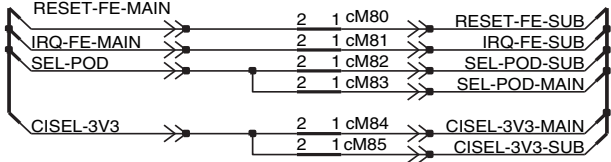
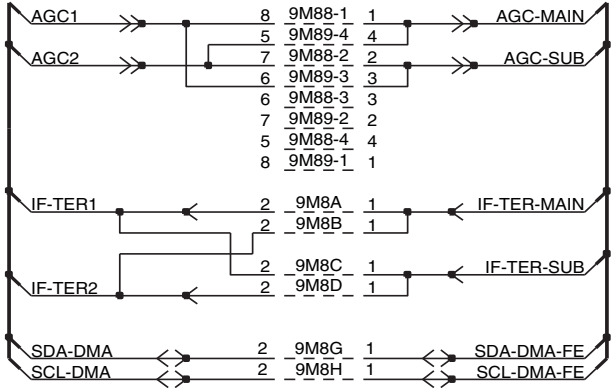
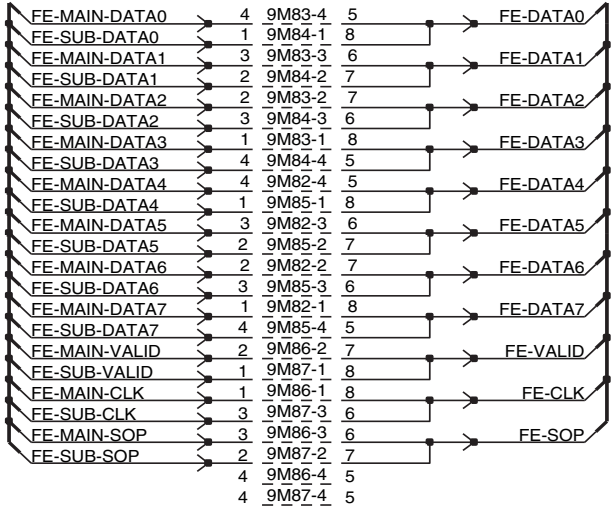
C

D

E

F

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- cM84 E7
- cM85 F7

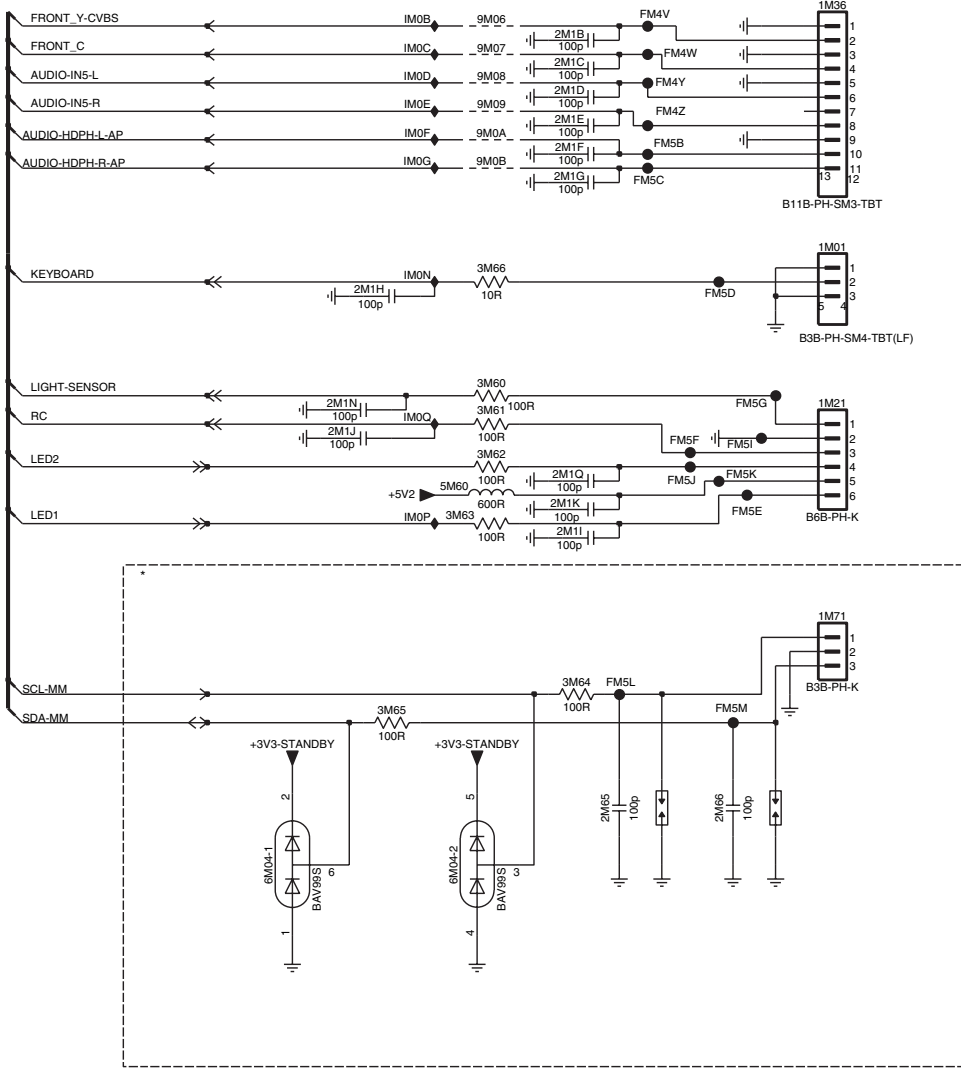


SSB: Miscellaneous Part 2

B16B

MISCELLANEOUS: PART 2

B16B

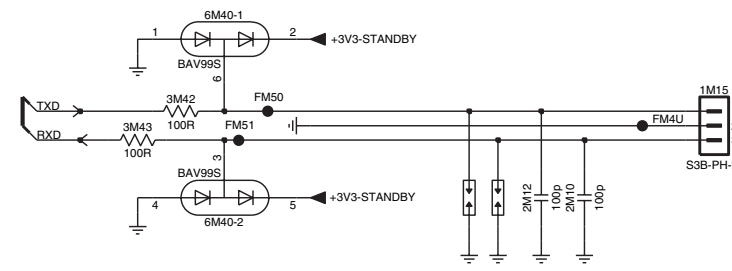
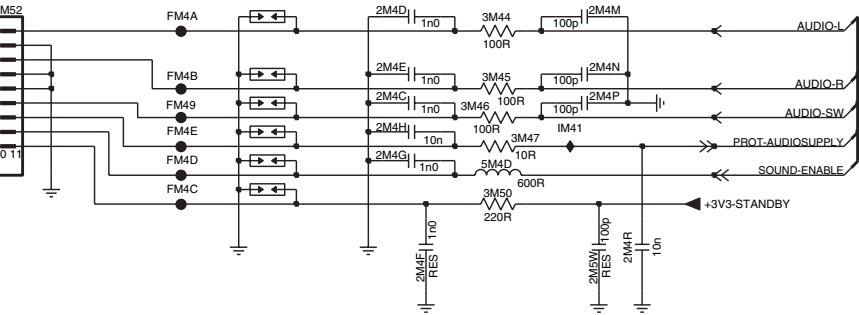
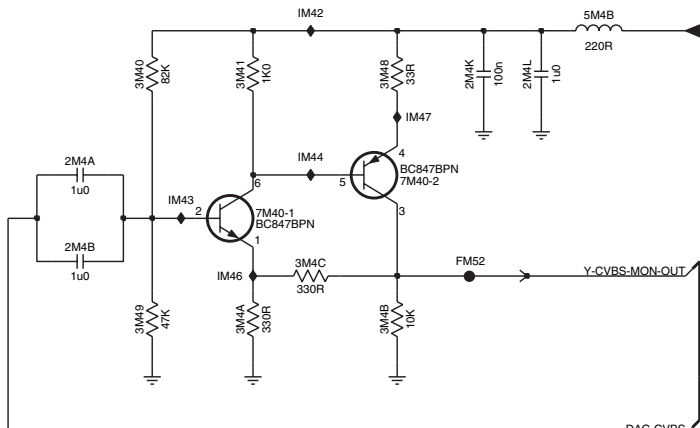


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- 2M1D B8
- 2M1E B8
- 2M1F B8
- 2M1G C8
- 2M1H C7
- 2M1I D8
- 2M1J D7
- 2M1K D8
- 2M1N D7
- 2M1Q D8
- 2M65 F8
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- 3M60 D7
- 3M61 D7
- 3M62 D7
- 3M63 D7
- 3M64 E8
- 3M65 E7
- 3M66 C7
- 5M60 D7
- 6M04-1 F6
- 6M04-2 F7
- 9M06 B7
- 9M07 B7
- 9M08 B7
- 9M09 B7
- 9M0A B7
- 9M0B B7
- FM4V B8
- FM4W B8
- FM4Y B8
- FM4Z B8
- FM5B B8
- FM5C C8
- FM5D C9
- FM5E D9
- FM5F D8
- FM5G D9
- FM5I D9
- FM5J D8
- FM5K D9
- FM5L E8
- FM5M E9
- IM0B B7
- IM0C B7
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- IM0G B7
- IM0N C7
- IM0P D7
- IM0Q D7

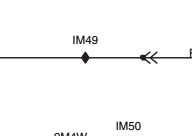
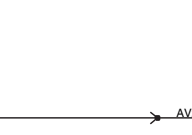
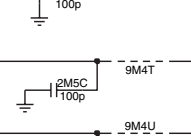
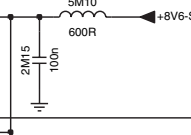
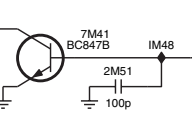
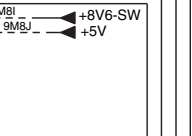
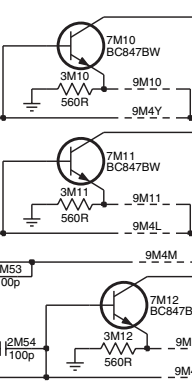
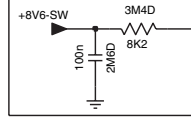
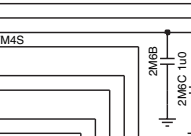
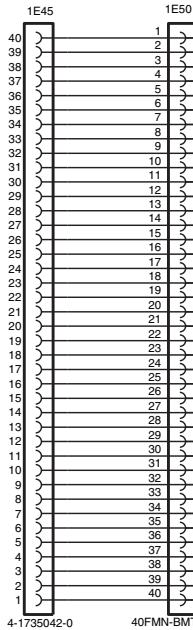
SSB: Miscellaneous Part 3

B16C MISCELLANEOUS: PART 3

B16C



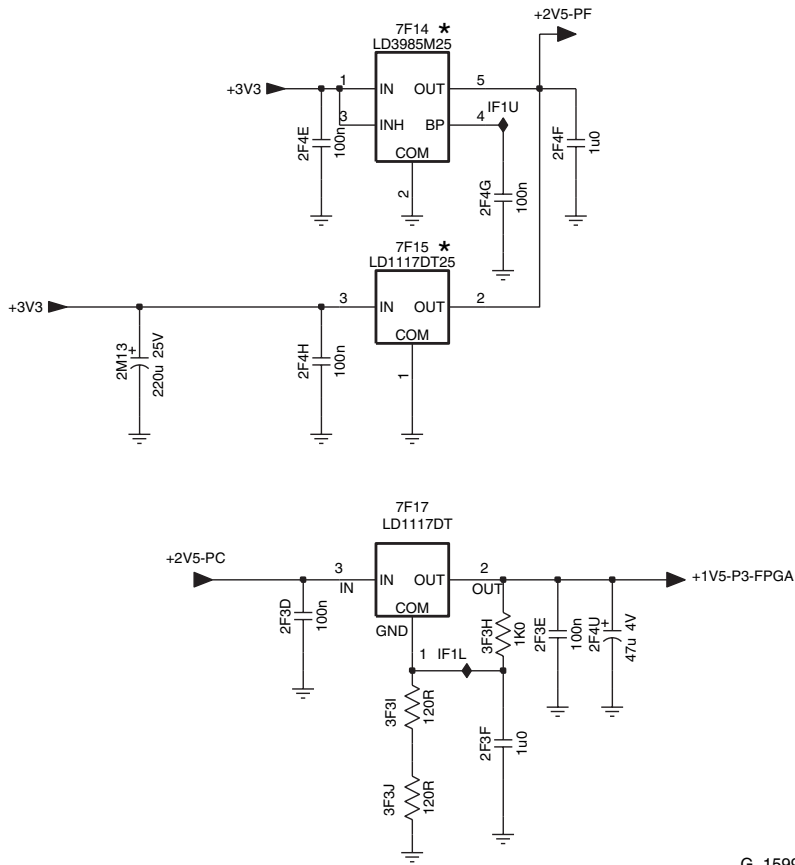
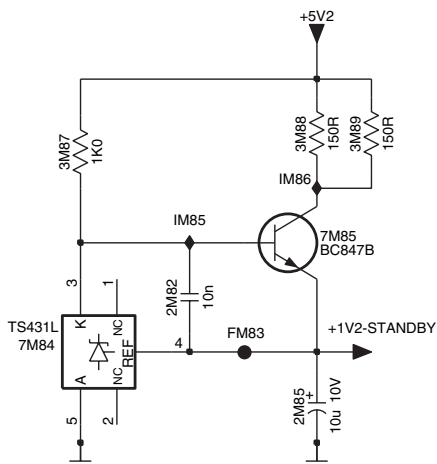
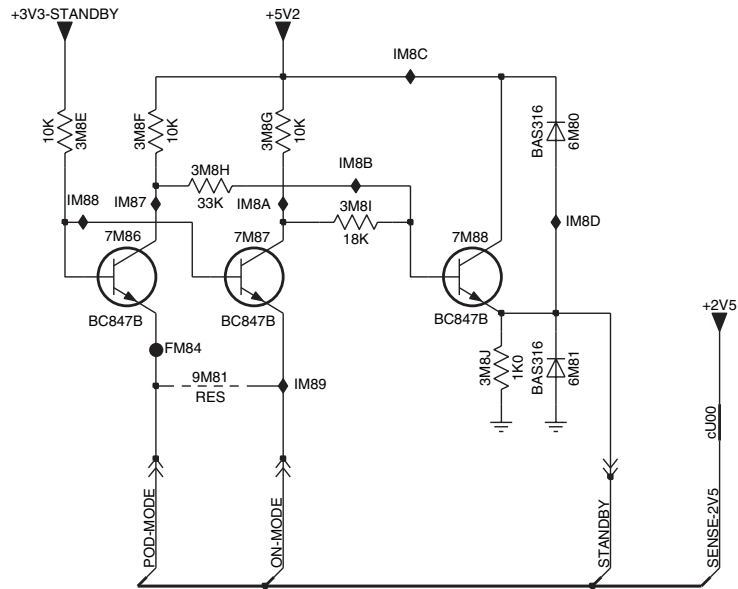
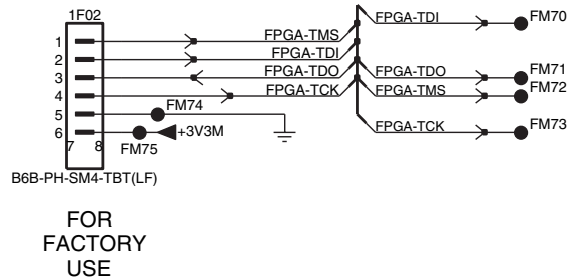
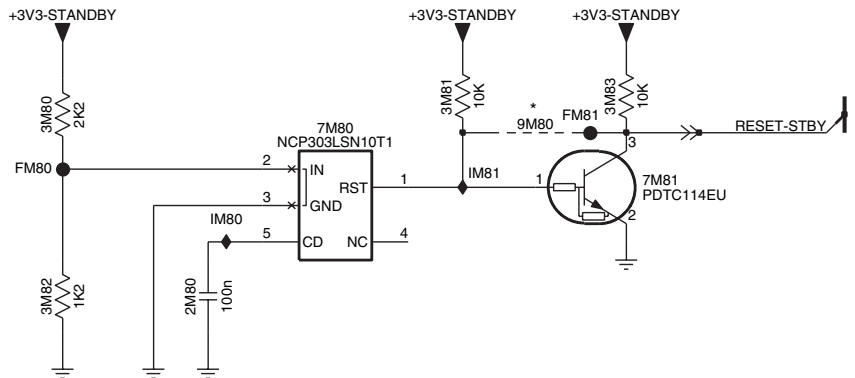
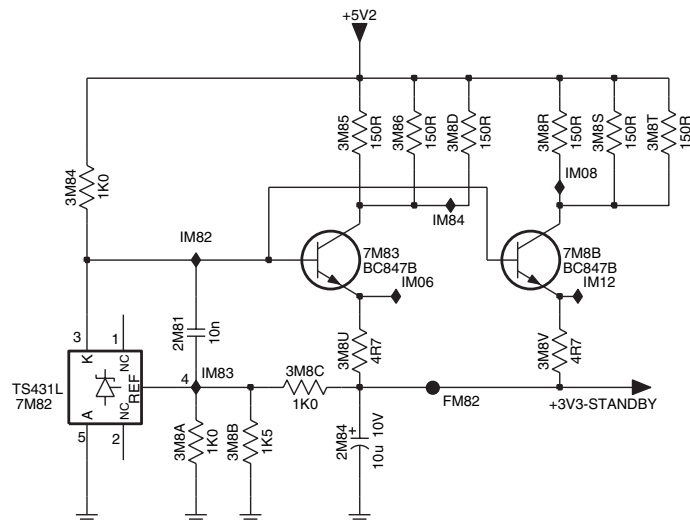
SERVICE
UART
CONNECTOR



SSB: Miscellaneous Part 4

B16D MISCELLANEOUS: PART 4

B16D

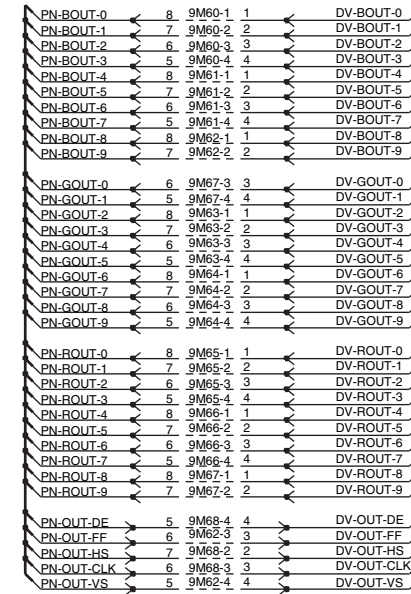


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- 1F02 A7 FM81 B6
- 2F3D F8 FM82 C2
- 2F3E F9 FM83 F5
- 2F3F F8 FM84 E1
- 2F4E D8 IF1L F8
- 2F4F D9 IF1U D8
- 2F4G D8 IM06 C2
- 2F4H E8 IM08 B3
- 2F4U F9 IM12 C3
- 2M13 E7 IM80 B5
- 2M80 C4 IM81 B6
- 2M81 C1 IM82 B1
- 2M82 F5 IM83 C1
- 2M84 C2 IM84 B2
- 2M85 F5 IM85 E5
- 3F3H F8 IM86 E5
- 3F3I F8 IM87 E1
- 3F3J F8 IM88 E1
- 3M80 B4 IM89 E2
- 3M81 B5 IM8A E2
- 3M82 C4 IM8B E2
- 3M83 B6 IM8C D2
- 3M84 B1 IM8D E3
- 3M85 B2 cU00 F3
- 3M86 B2
- 3M87 E5
- 3M88 E5
- 3M89 E6
- 3M8A C1
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- 3M8C C2
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- FM75 B8
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B16F MISCELLANEOUS: PART 6



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IN

SRP: Direction for Use

1.1. Introduction

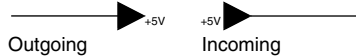
SRP (Service Reference Protocol) is a software tool that creates a list with all references to signal lines. The list contains references to the signals within all schematics of a PWB. It replaces the text references currently printed next to the signal names in the schematics. These printed references are created manually and are therefore not guaranteed to be 100% correct. In addition, in the current crowded schematics there is often none or very little place for these references. Some of the PWB schematics will use SRP while others will still use the manual references. Either there will be an SRP reference list for a schematic, or there will be printed references in the schematic.

1.2. Non-SRP Schematics

There are several different signals available in a schematic:

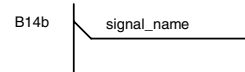
1.2.1. Power Supply Lines

All power supply lines are available in the supply line overview (see chapter 6). In the schematics (see chapter 7) is not indicated where supplies are coming from or going to. It is however indicated if a supply is incoming (created elsewhere), or outgoing (created or adapted in the current schematic).



1.2.2. Normal Signals

For normal signals, a schematic reference (e.g. B14b) is placed next to the signals.

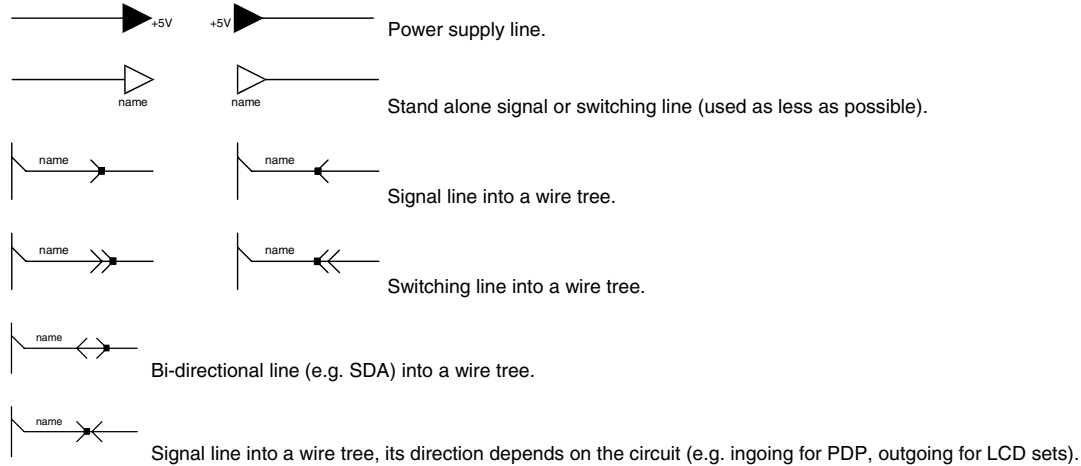


1.2.3. Grounds

For normal and special grounds (e.g. GNDHOT or GND3V3 etc.), nothing is indicated.

1.3. SRP Schematics

SRP is a tool, which automatically creates a list with signal references, indicating on which schematic the signals are used. A reference is created for all signals indicated with an SRP symbol, these symbols are:



Remarks:

- When there is a black dot on the "signal direction arrow" it is an SRP symbol, so there will be a reference to the signal name in the SRP list.
- All references to normal grounds (Ground symbols without additional text) are not listed in the reference list, thus to keep it concise.
- Signals that are not used in multiple schematics, but only once or several times in the same schematic, are included in the SRP reference list, but only with one reference.

Additional Tip:

When using the PDF service manual file, you can very easily search for signal names and follow the signal over all the schematics. In Adobe PDF reader:

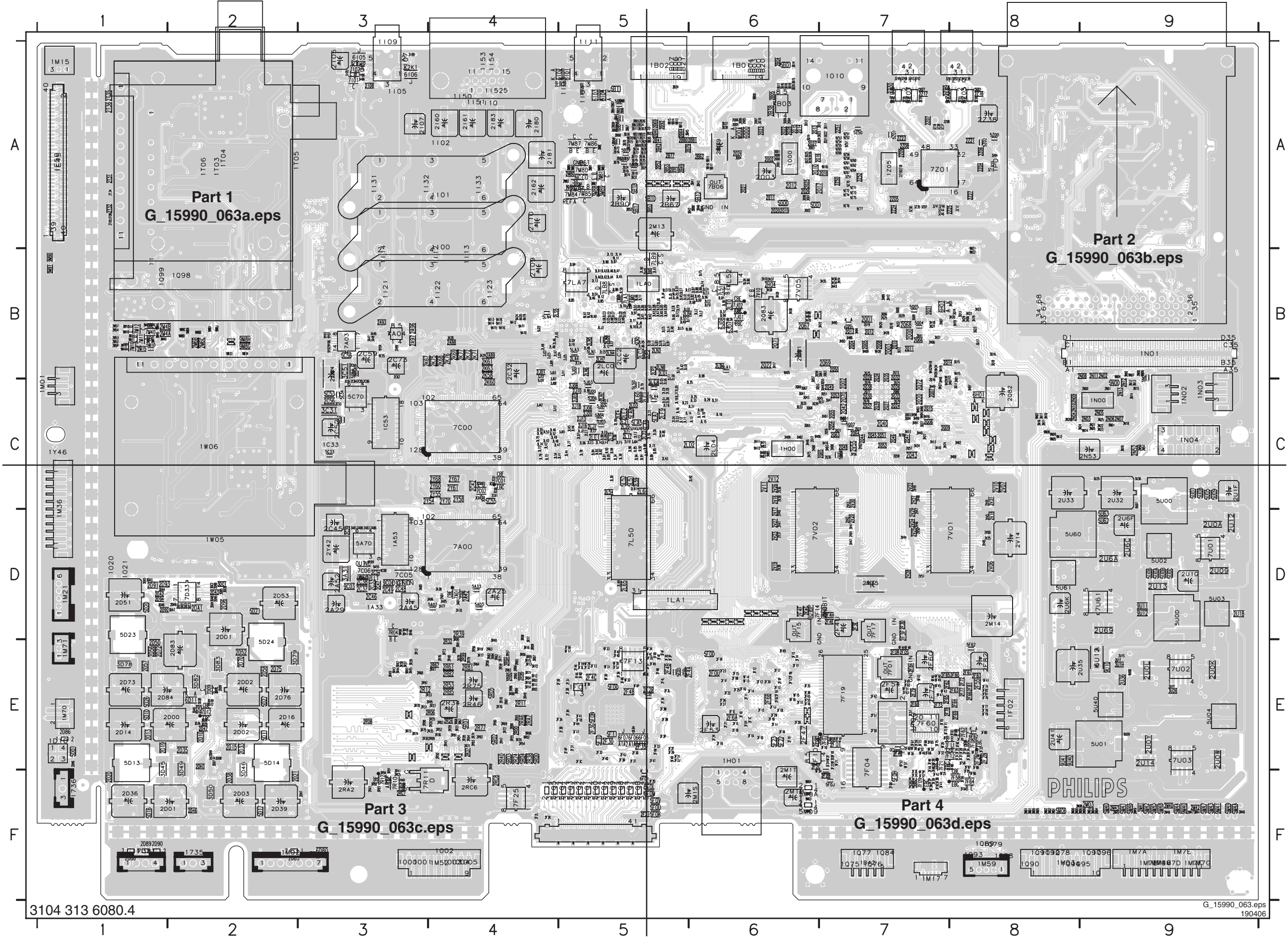
- Select the signal name you want to search for, with the "Select text" tool.
- Copy and paste the signal name in the "Search PDF" tool.
- Search for all occurrences of the signal name.
- Now you can quickly jump between the different occurrences and follow the signal over all schematics. It is advised to "zoom in" to e.g. 150% to see clearly, which text is selected. Then you can zoom out, to get an overview of the complete schematic.

PS. It is recommended to use at least Adobe PDF (reader) version 6.x, due to better search possibilities in this version.

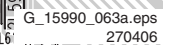
Layout SSB (Top Side Mapping)

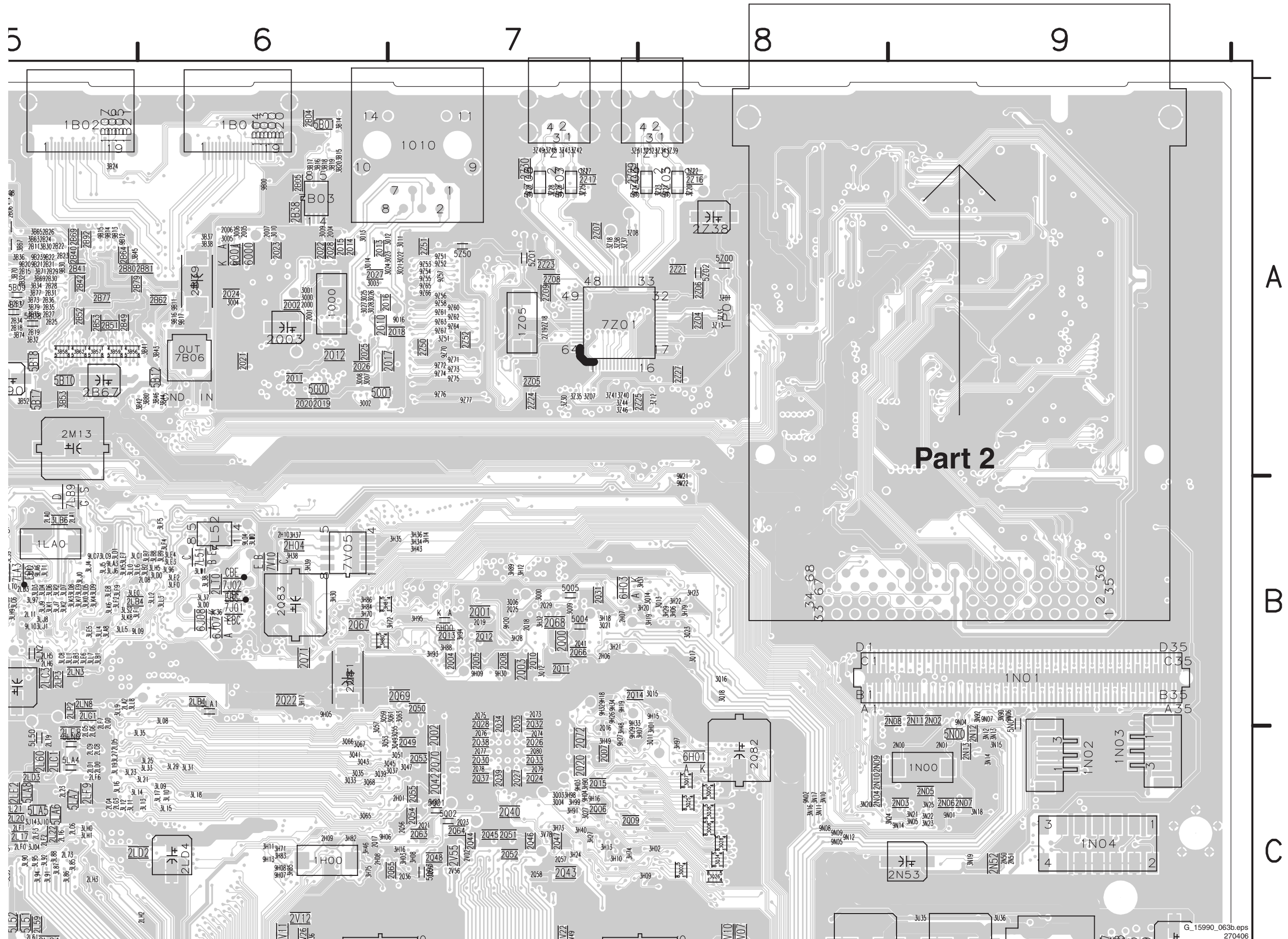
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1736 F1	2C32 B4	2F21 E6	2I81 A4	2LT7 C5	2Q38 C7	2R98 E3	3A06 D4	3F37 F7	3H88 B7	3LD3 B5	3N93 A6	3R95 A1	5J07 C5	7F26 E8	9H20 B7
1738 F1	2C33 D3	2F22 E6	2I83 A4	2LT8 C5	2Q39 C7	2R99 E4	3A28 B4	3F38 F7	3H89 B7	3LD4 B5	3N94 C5	3R96 E7	5J08 C5	7F27 E8	9H21 B7
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1A53 D3	2C37 D3	2F24 E6	2J03 C5	2M00 F8	2Q41 B7	2RA2 F3	3A31 D3	3F3A F7	3H91 C7	3LD6 B5	3N96 A6	3R98 E9	5J10 C5	7F29 E8	9H23 C7
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1F00 E7	2C52 C3	2F2K F4	2J23 B4	2M13 A5	2Q50 B7	2RC5 F3	3B16 A6	3F3S E6	3I02 A5	3LE6 B5	3O12 A6	3Z02 A7	5LNO C5	7I54 B5	9L10 B5
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1G50 F5	2C59 B3	2F2N E8	2K58 B4	2M15 F5	2Q53 C7	2RC8 F4	3B19 A6	3F45 E6	3I07 A3	3LE9 B5	3O21 A7	3Z13 A8	5LN4 B4	7M10 B1	9L13 B5
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Layout SSB (Top Side Overview)



C



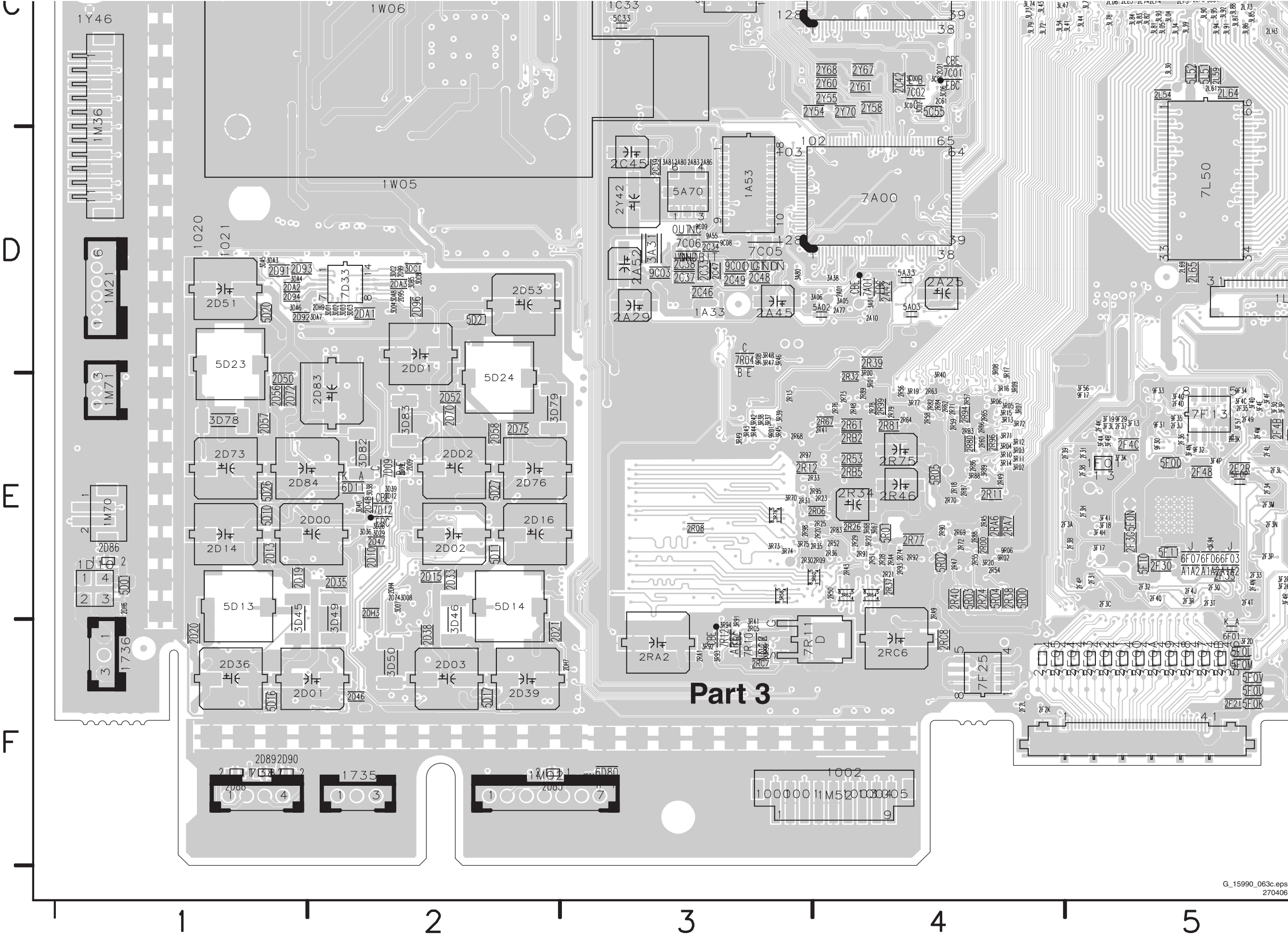


A

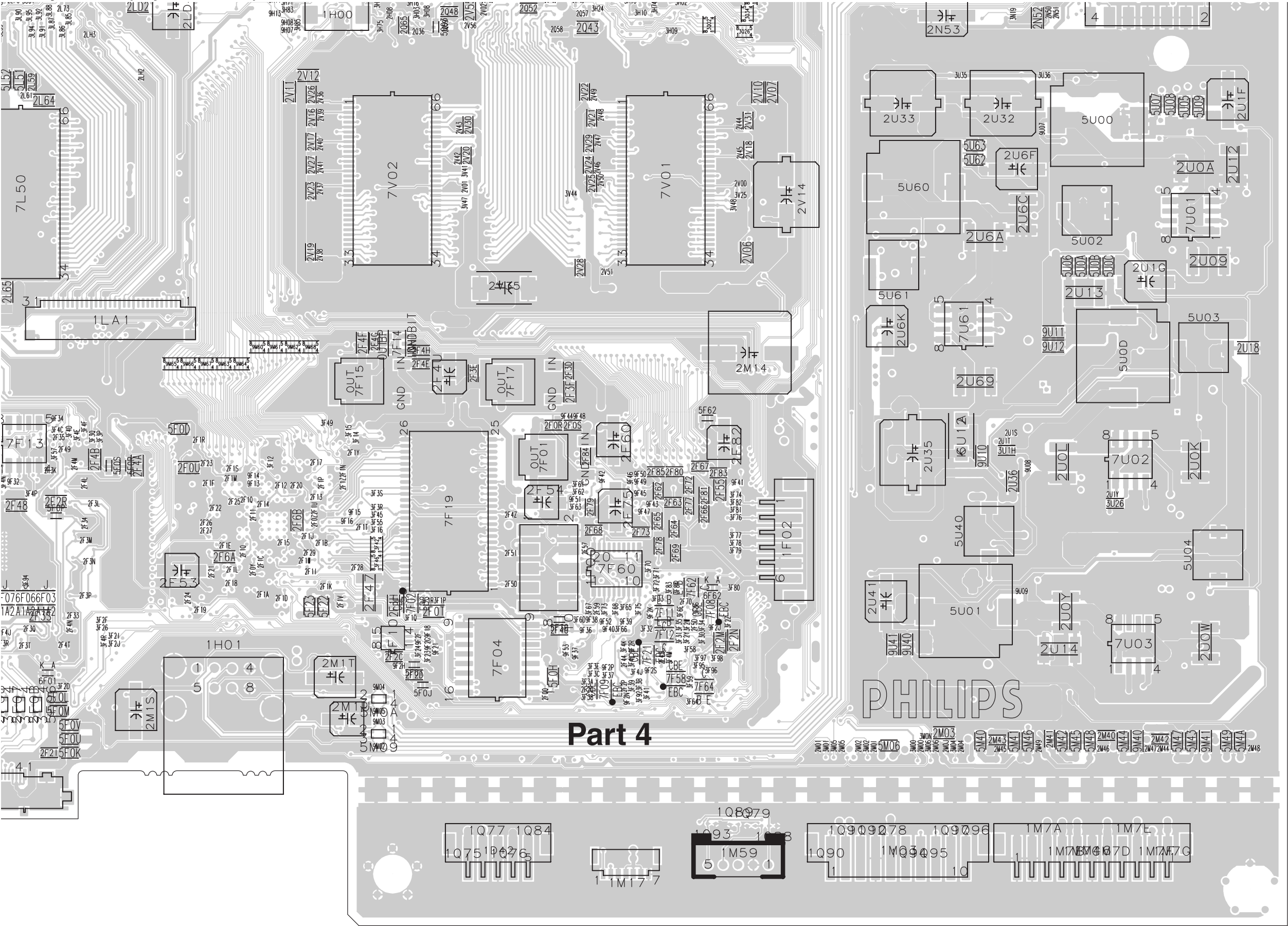
B

C

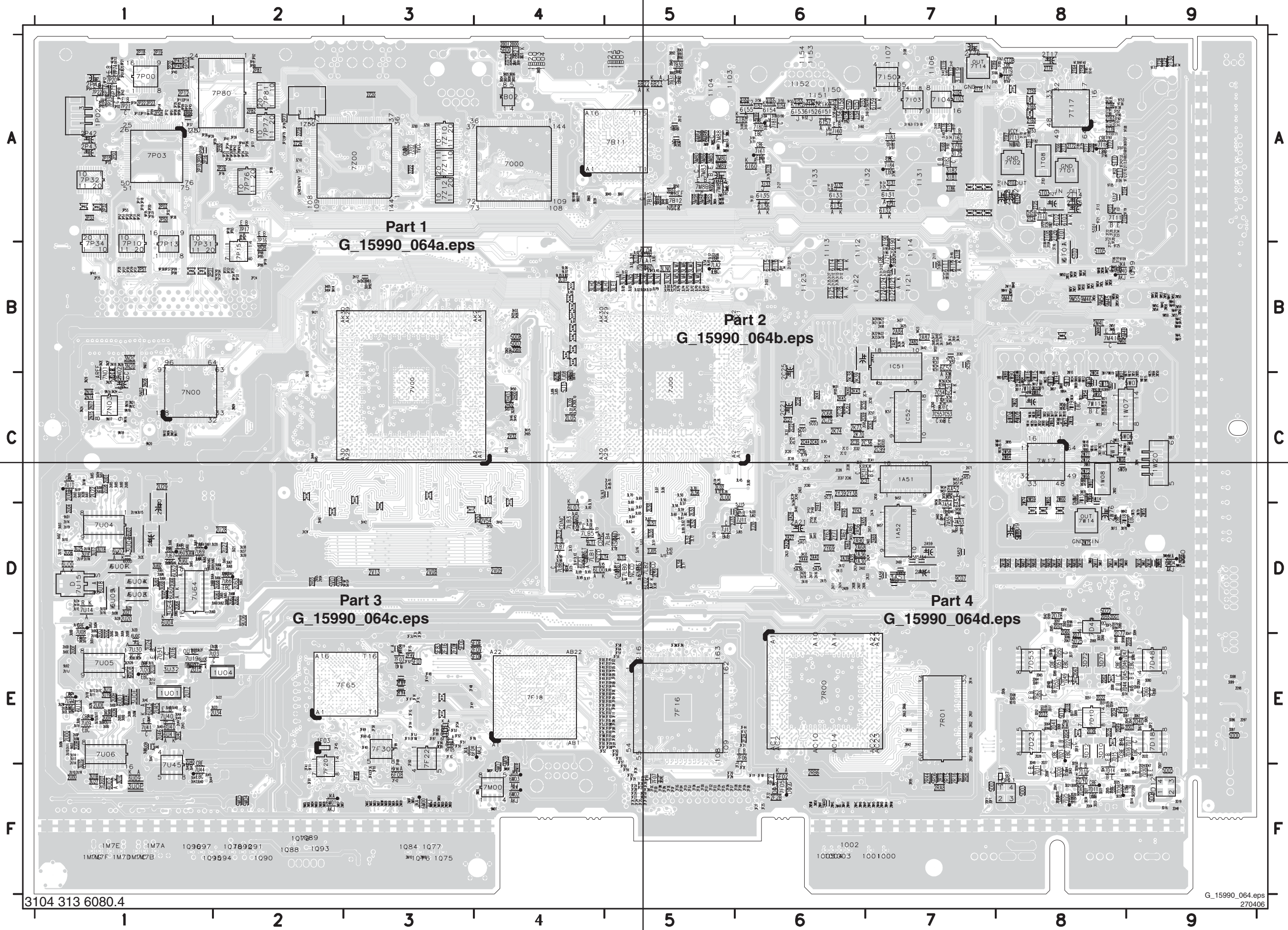
Layout SSB (Top Side Part 3)



Layout SSB (Top Side Part 4)



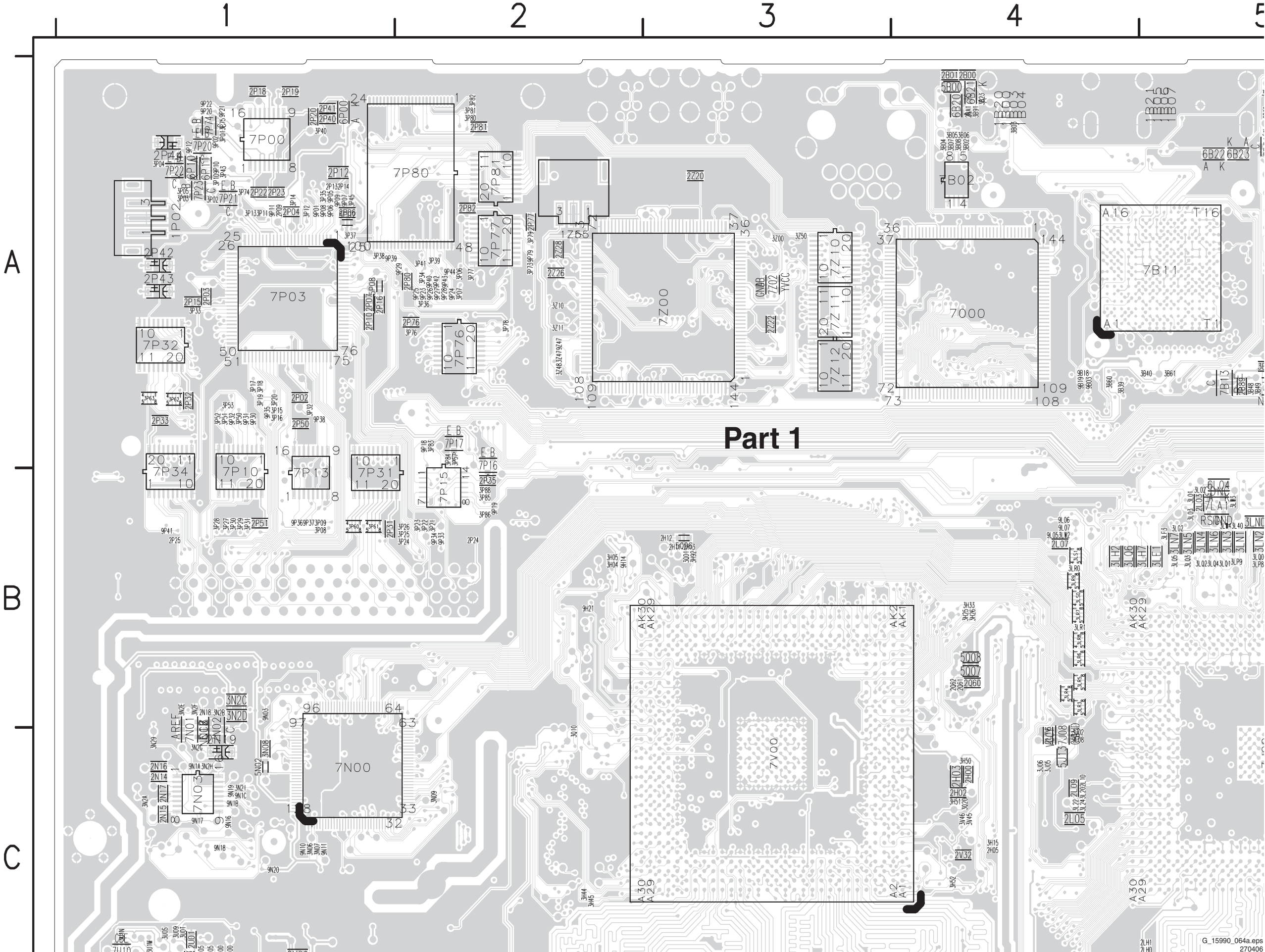
Layout SSB (Overview Bottom Side)



Layout SSB (Bottom Side Mapping)

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1A52	D7	2D22	E8	2K38	C6	2P24	B2	2U1N	D1	3A19	B7	3D81	E8	3F5F	E4	3L06	C5	3M0T	F3	3T25	A8	3U4E	E1	5F83	E3	6U62	D1	7U30	E1	9P09	A1
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2A50	C7	2DG1	D8	2M08	F2	2T09	A8	2U6N	D1	3B76	A5	3F0G	E5	3H52	C4	3LM4	B5	3N2D	B1	3U0E	E1	3V24	D2	5W14	C8	7D62	E8	9C57	C7	9T25	B8
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Layout SSB (Bottom Side Part 1)



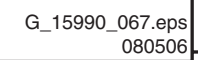
9



1I01 C14	3O45 I10	1O03 G2
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1O06 C8	3O48 I4	1O06 B7
1O07 B12	3O49 H2	1O07 C7
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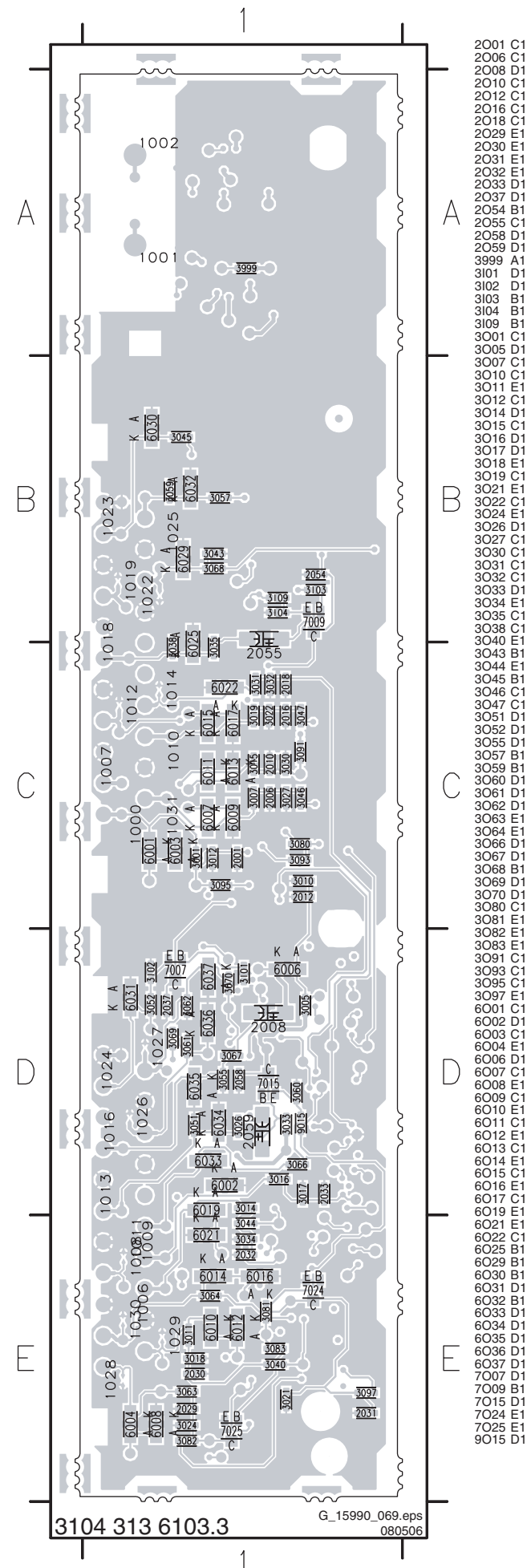
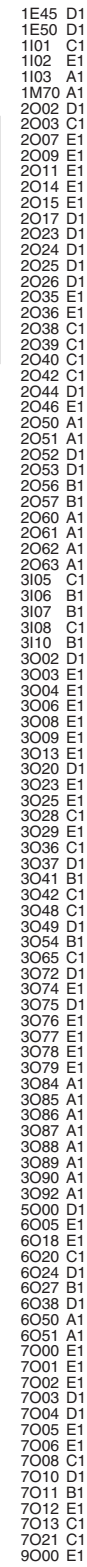
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BE2 EXTERNALS B

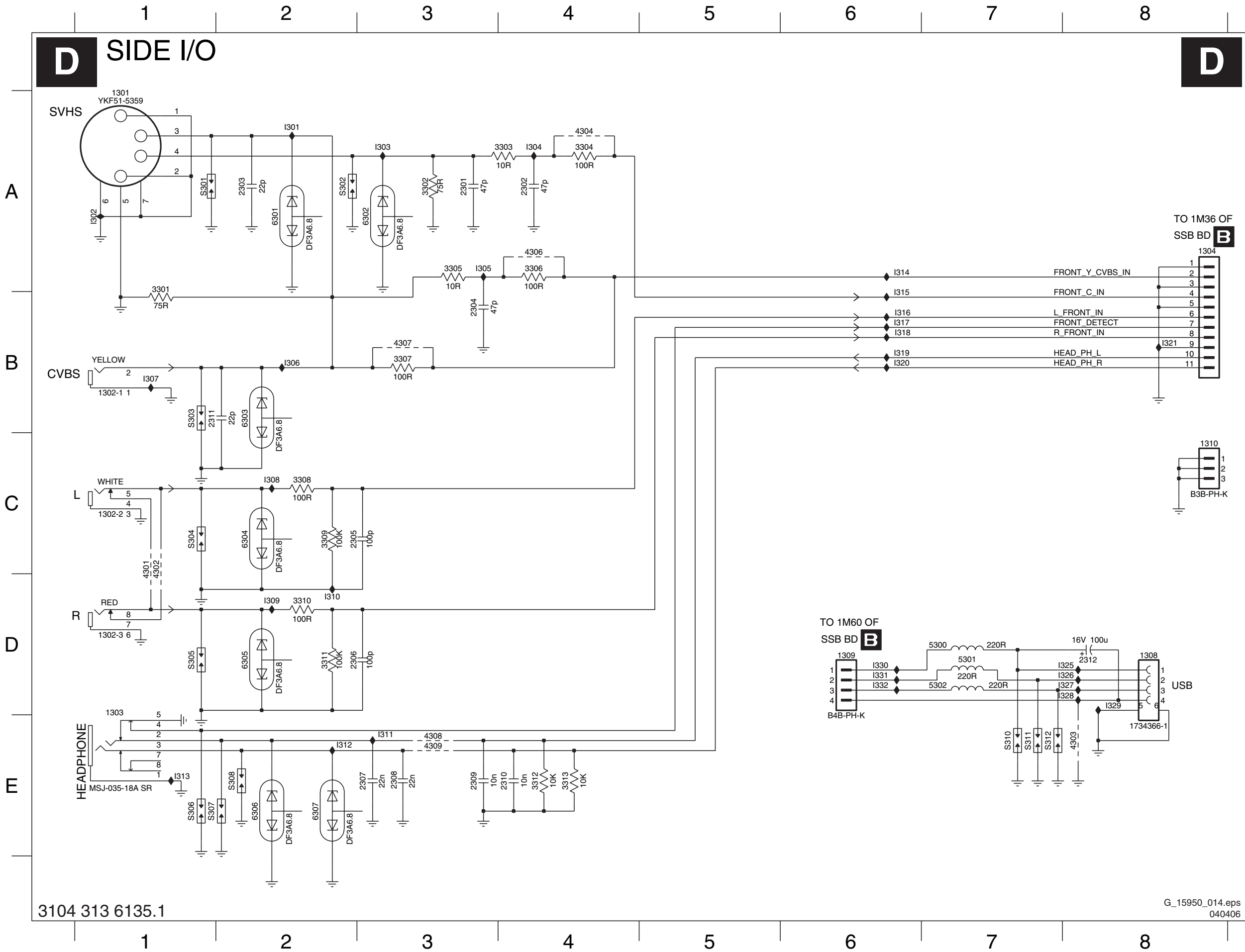


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1O01 D4	FO99 F2
1O02 F4	IO50 D5
2O40 A5	IO51 D6
2O42 B5	IO52 E5
2O44 B5	IO53 F5
2O46 C5	IO54 F5
2O50 D5	IO55 F6
2O51 E5	IO56 E7
2O60 F5	IO57 D6
2O61 F5	IO59 F6
2O62 E5	IO60 E5
2O63 E5	
3999 F1	
3O80 B6	
3O81 C6	
3O82 C5	
3O83 D6	
3O84 D5	
3O85 D6	
3O86 D6	
3O87 D7	
3O88 F5	
3O89 F6	
3O90 F6	
3O91 A5	
3O92 F7	
3O93 A6	
3O95 B5	
3O97 C5	
6O50 E7	
6O51 F7	
7O21-1 B6	
7O21-2 A6	
7O24 C6	
7O25 D6	
FO00 B2	
FO01 B2	
FO02 B2	
FO03 B2	
FO04 B2	
FO05 C2	
FO06 B2	
FO07 C2	
FO08 C2	
FO09 C2	
FO10 C2	
FO11 C2	
FO12 C2	
FO13 C2	
FO14 C2	
FO15 A5	
FO16 C2	
FO19 D2	
FO20 D2	
FO21 D2	
FO22 D2	
FO23 D2	
FO24 D2	
FO25 B5	
FO26 C5	
FO27 D5	
FO28 E2	
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FO32 E2	
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FO42 D7	
FO43 F7	

Layout External I/O Panel (Bottom Side)

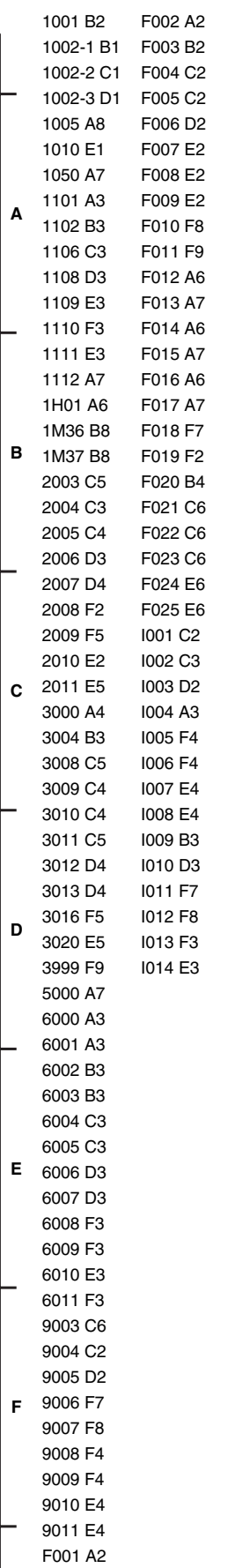


Side I/O Panel (ME6)

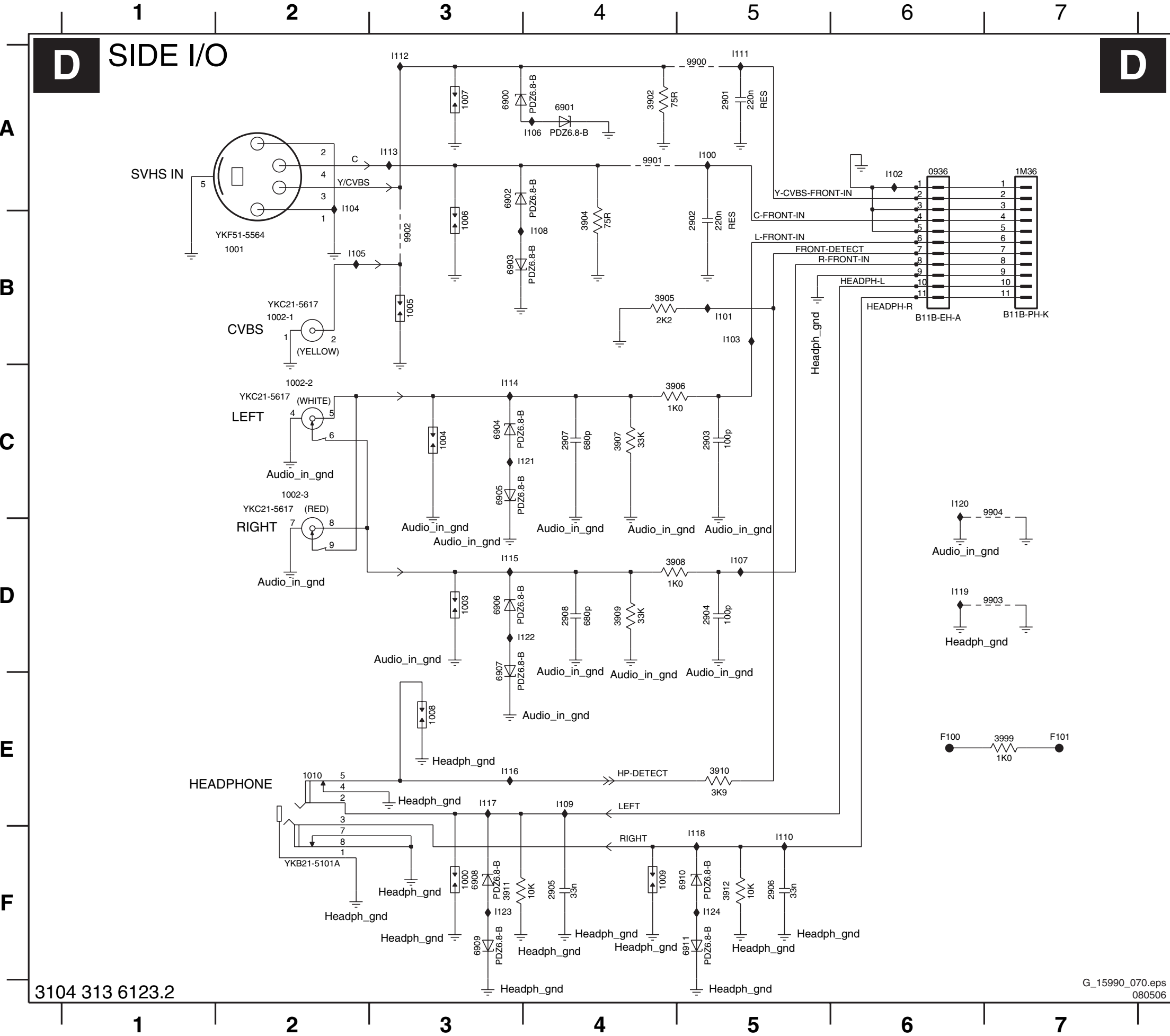


- 1301 A1
- 1302-1 B1
- 1302-2 C1
- 1302-3 D1
- 1303 D1
- 1304 A8
- 1308 D8
- 1309 D6
- 1310 C8
- 2301 A3
- 2302 A4
- 2303 A2
- 2304 B3
- 2305 C2
- 2306 D2
- 2307 E3
- 2308 E3
- 2309 E3
- 2310 E4
- 2311 B1
- 2312 D8
- 3301 B1
- 3302 A3
- 3303 A4
- 3304 A4
- 3305 A3
- 3306 A4
- 3307 B3
- 3308 C2
- 3309 C2
- 3310 D2
- 3311 D2
- 3312 E4
- 3313 E4
- 4301 C1
- 4302 C1
- 4303 E8
- 4304 A4
- 4306 A4
- 4307 B3
- 4308 E3
- 4309 E3
- 5300 D7
- 5301 D7
- 5302 D7
- 6301 A2
- 6302 A3
- 6303 B2
- 6304 C2
- 6305 D2
- 6306 E2
- 6307 E2
- I301 A2
- I302 A1
- I303 A3
- I304 A4
- I305 A3
- I306 B2
- I307 B1
- I308 C2
- I309 D2
- I310 D2
- I311 E3
- I312 E2
- I313 E1
- I314 A6
- I315 B6
- I316 B6
- I317 B6
- I318 B6
- I319 B6
- I320 B6
- I321 B8
- I325 D8
- I326 D8
- I327 D8
- I328 D8
- I329 D8
- I330 D6
- I331 D6
- I332 D6
- S301 A1
- S302 A2
- S303 B1
- S304 C1
- S305 D1
- S306 E1
- S307 E1
- S308 E2
- S310 E7
- S311 E7
- S312 E7

D SIDE I/O

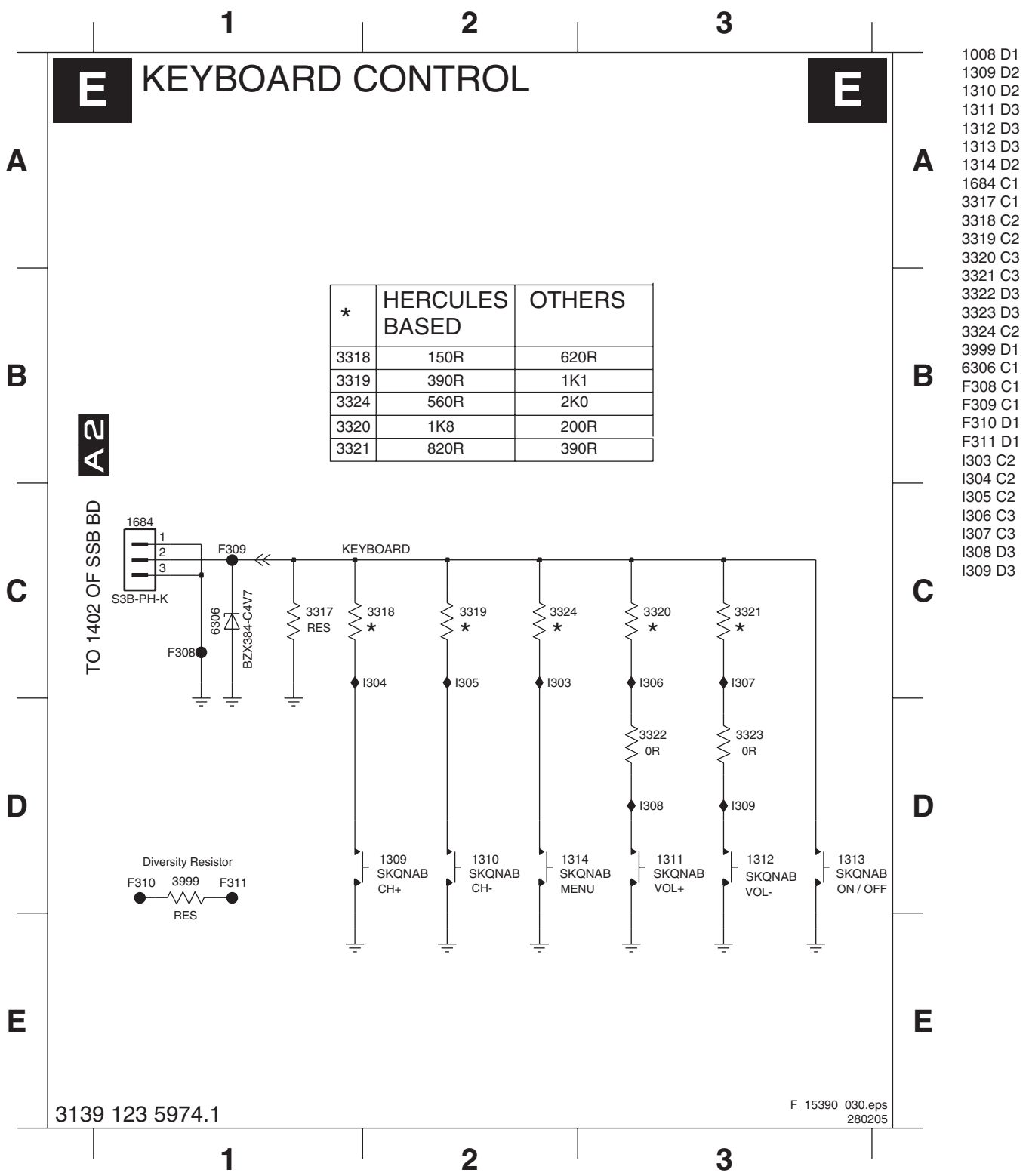


Side I/O Panel (TOP 37" & 42")



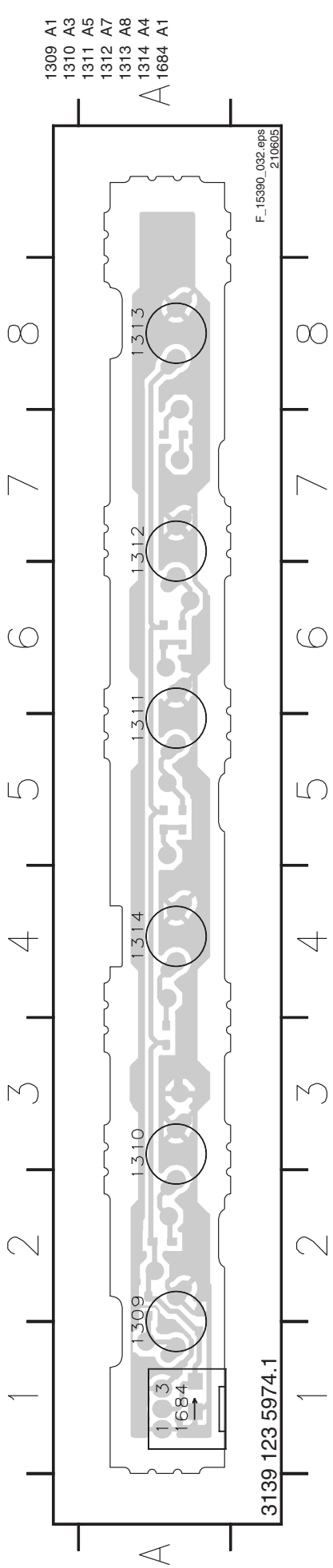
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- 1000 F3
- 1001 B2
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- 1002-2 C2
- 1002-3 C2
- 1003 D3
- 1004 C3
- 1005 B3
- 1006 B3
- 1007 A3
- 1008 E3
- 1009 F4
- 1010 E2
- 1M36 A7
- 2901 A5
- 2902 B5
- 2903 C5
- 2904 D5
- 2905 F4
- 2906 F5
- 2907 C4
- 2908 D4
- 3902 A4
- 3904 B4
- 3905 B4
- 3906 C4
- 3907 C4
- 3908 D4
- 3909 D4
- 3910 E5
- 3911 F3
- 3912 F5
- 3999 E7
- 6900 A3
- 6901 A4
- 6902 A3
- 6903 B3
- 6904 C3
- 6905 C3
- 6906 D3
- 6907 D3
- 6908 F3
- 6909 F3
- 6910 F5
- 6911 F5
- 9900 A5
- 9901 A4
- 9902 B3
- 9903 D7
- 9904 C7
- F100 E6
- F101 E7
- I100 A5
- I101 B5
- I102 A6
- I103 B5
- I104 A2
- I105 B2
- I106 A4
- I107 D5
- I108 B4
- I109 E4
- I110 F5
- I111 A5
- I112 A3
- I113 A3
- I114 C3
- I115 D3
- I116 E3
- I117 E3
- I118 F5
- I119 D6
- I120 C6
- I121 C4
- I122 D4
- I123 F3
- I124 F5

Control Panel (ME6 32")

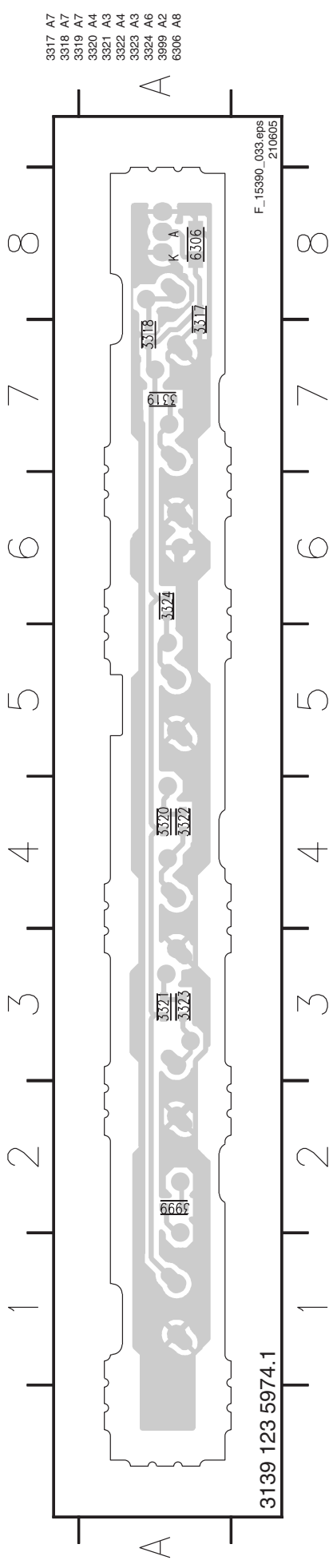


- 1008 D1
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- 1310 D2
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- 1313 D3
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- 1684 C1
- 3317 C1
- 3318 C2
- 3319 C2
- 3320 C3
- 3321 C3
- 3322 D3
- 3323 D3
- 3324 C2
- 3999 D1
- 6306 C1
- F308 C1
- F309 C1
- F310 D1
- F311 D1
- I303 C2
- I304 C2
- I305 C2
- I306 C3
- I307 C3
- I308 D3
- I309 D3

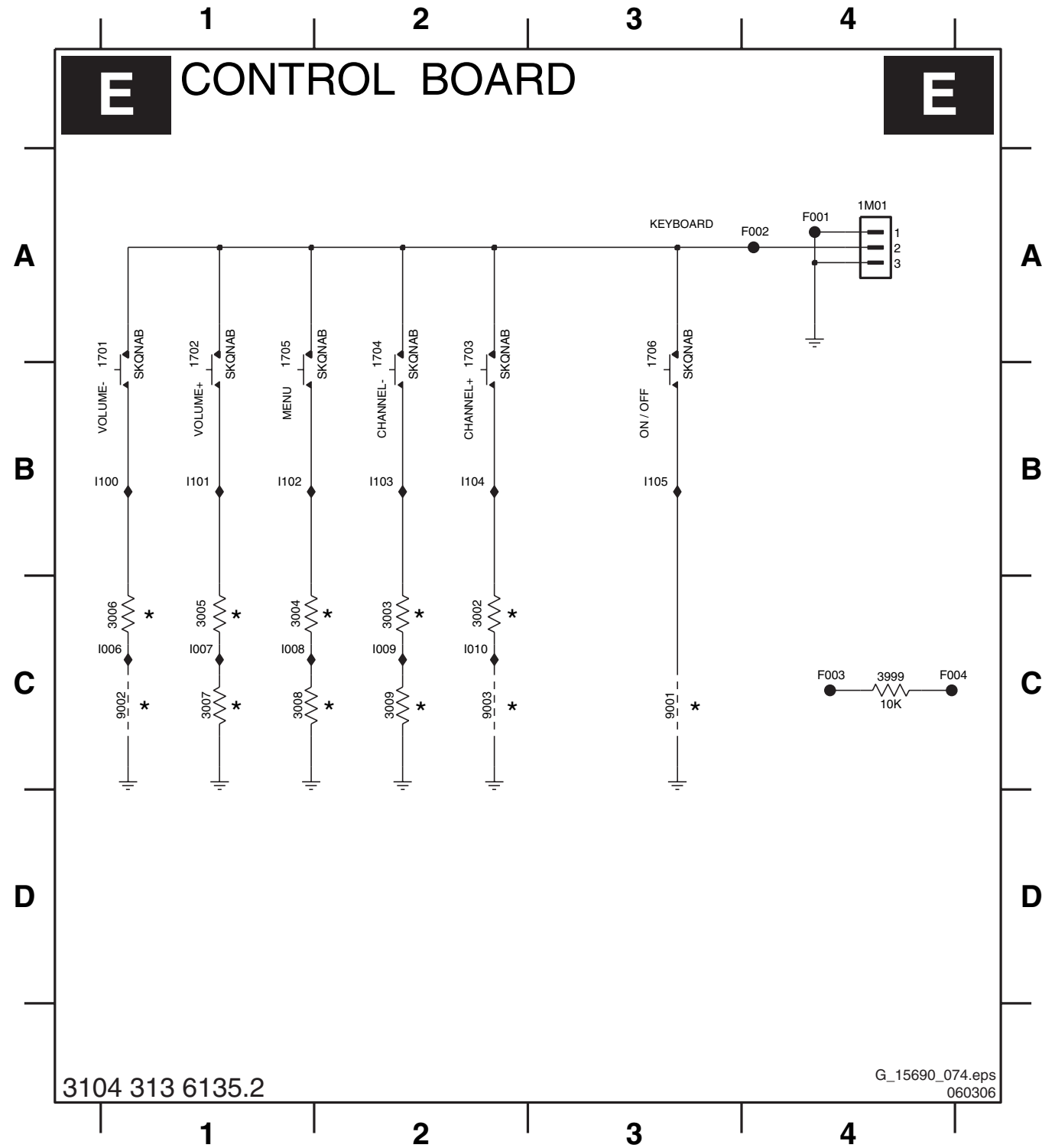
Layout Control Panel (Top Side)



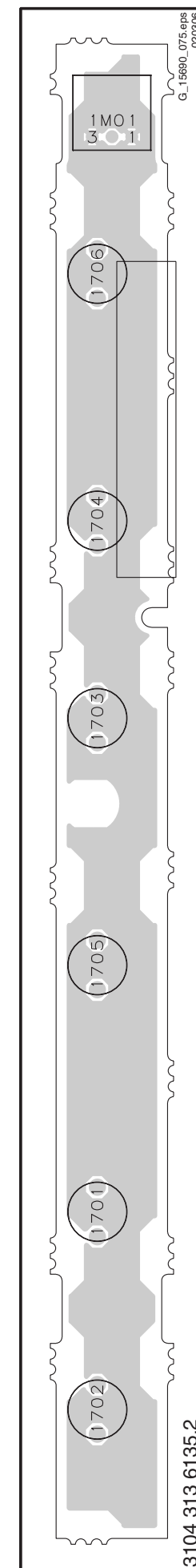
Layout Control Panel (Bottom Side)



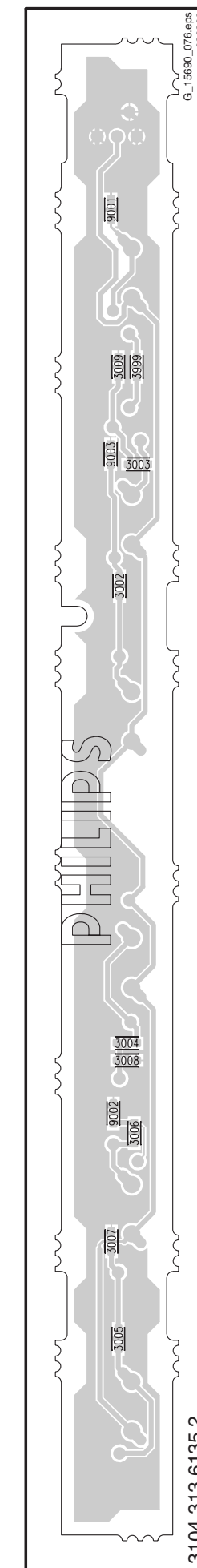
1701 A1	1704 A2	1M01 A4	3004 C1	3007 C1	3999 C4	9003 C2	F003 C4	I007 C1	I010 C2	I102 B1	I105 B3
1702 A1	1705 A1	3002 C2	3005 C1	3008 C1	9001 C3	F001 A4	F004 C4	I008 C1	I100 B1	I103 B2	
1703 A2	1706 A3	3003 C2	3006 C1	3009 C2	9002 C1	F002 A4	I006 C1	I009 C2	I101 B1	I104 B2	



Layout Control Panel (Top Side)

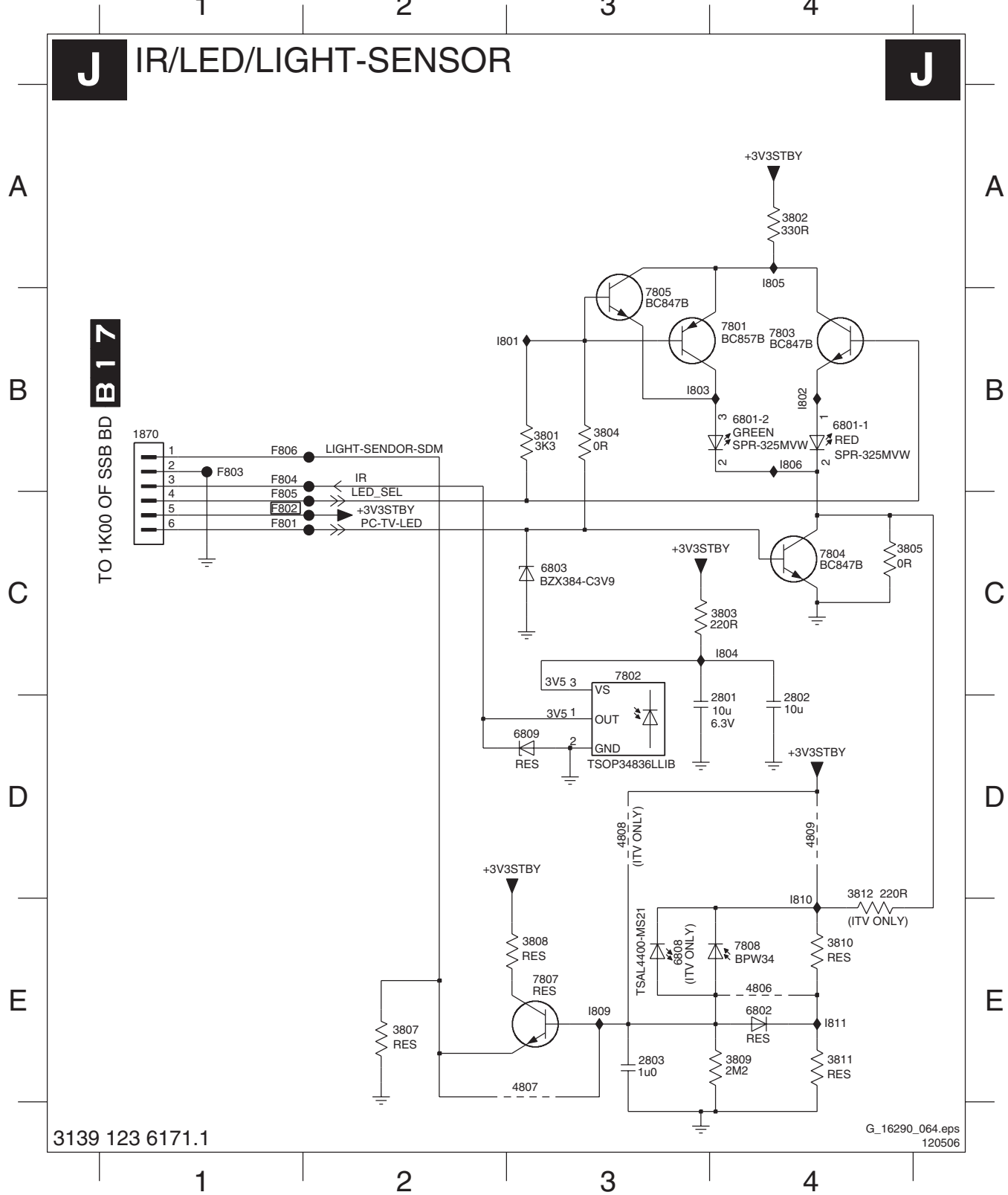


Layout Control Panel (Bottom Side)

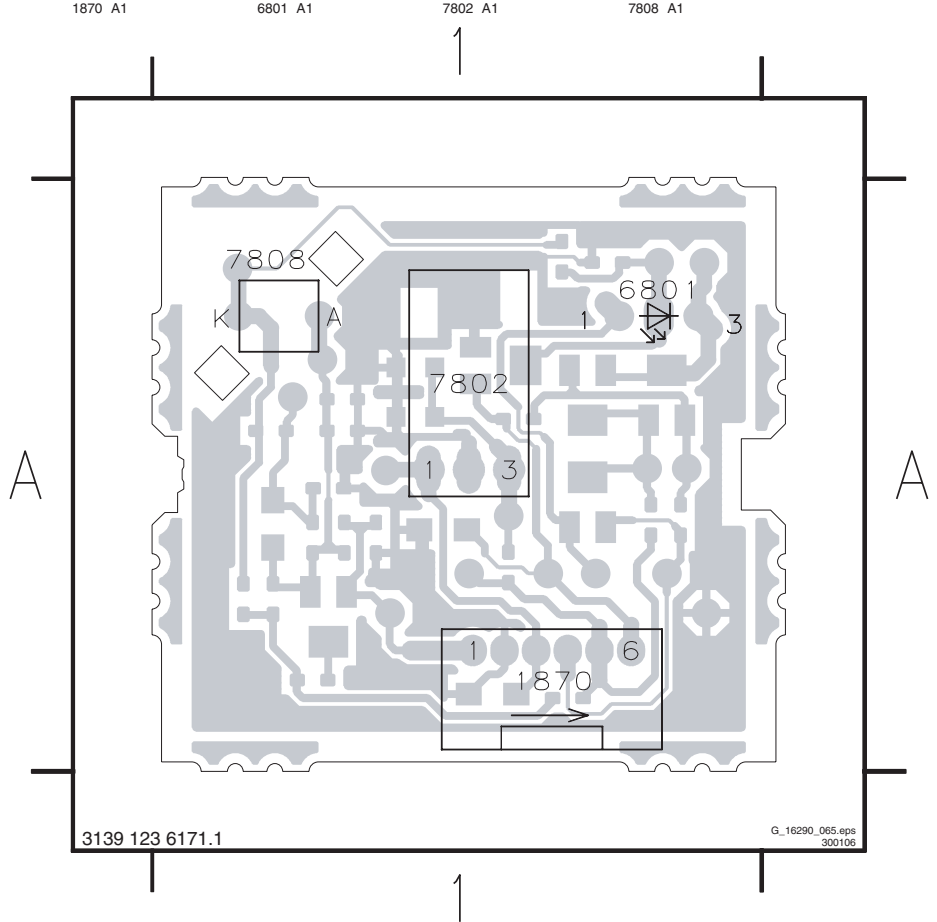


Front IR / LED Panel (ME6)

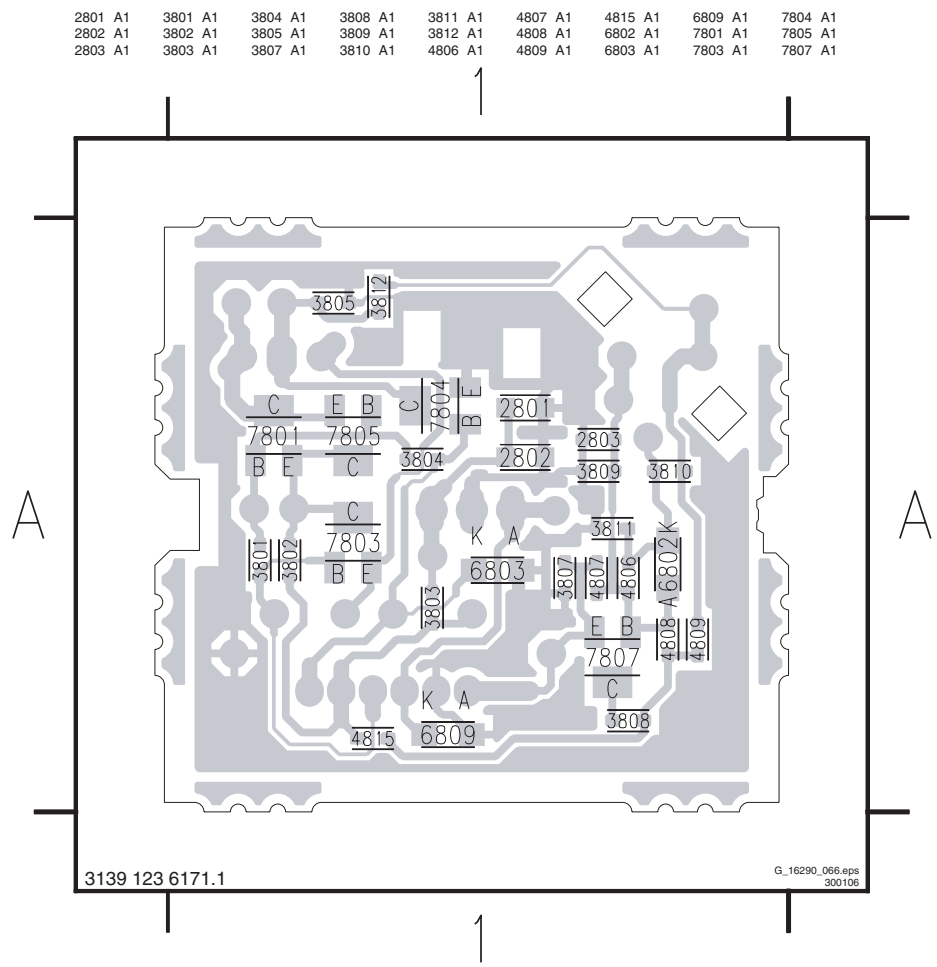
1870 B1	3802 A4	3808 E3	4806 E4	6801-2 B4	7802 C3	7808 E4	F805 C1	I804 C4	I811 E4
2801 D4	3803 C4	3809 E4	4807 E3	6802 E4	7803 B4	F801 C1	F806 B1	I805 A4	
2802 D4	3804 B3	3810 E4	4808 D3	6803 C3	7804 C4	F802 C1	I801 B3	I806 B4	
2803 E3	3805 C4	3811 E4	4809 D4	6809 D3	7805 B3	F803 B1	I802 B4	I809 E3	
3801 B3	3807 E2	3812 D4	6801-1 B4	7801 B4	7807 E3	F804 B1	I803 B3	I810 E4	



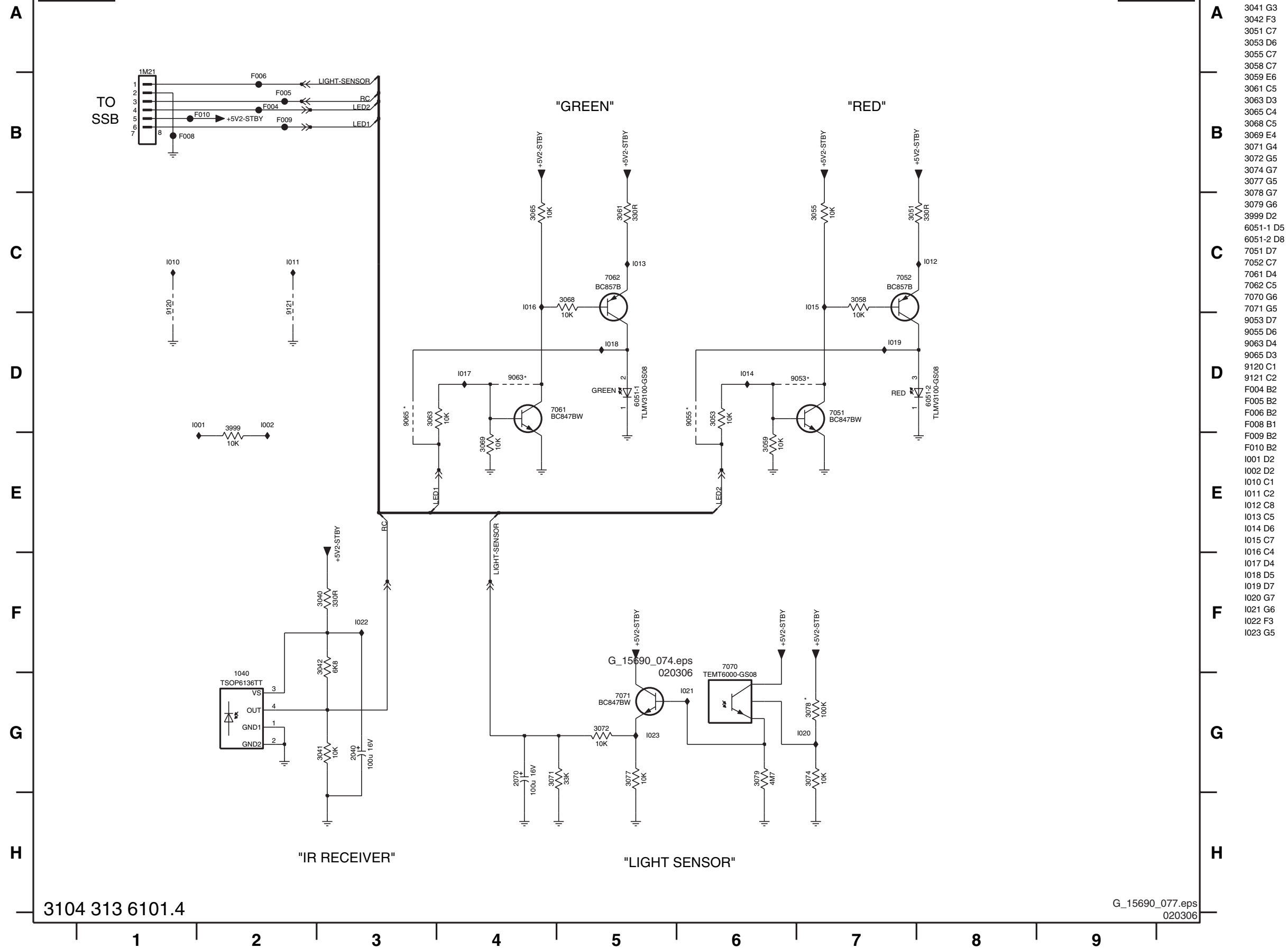
Layout Front IR / LED Panel (ME6) (Top Side)



Layout Front IR / LED Panel (ME6) (Bottom Side)



LED PANEL



Top view of the PCB showing components 2070, 3078, 1M2 1, and 2040. The board is populated with two integrated circuits (2070 and 2040), two surface-mount components (3078 and 1M2 1), and a multi-pin connector (6 pins). The board is populated with two integrated circuits (2070 and 2040), two surface-mount components (3078 and 1M2 1), and a multi-pin connector (6 pins).

G_15690_078.eps
020306

G_15690_079.eps
020306

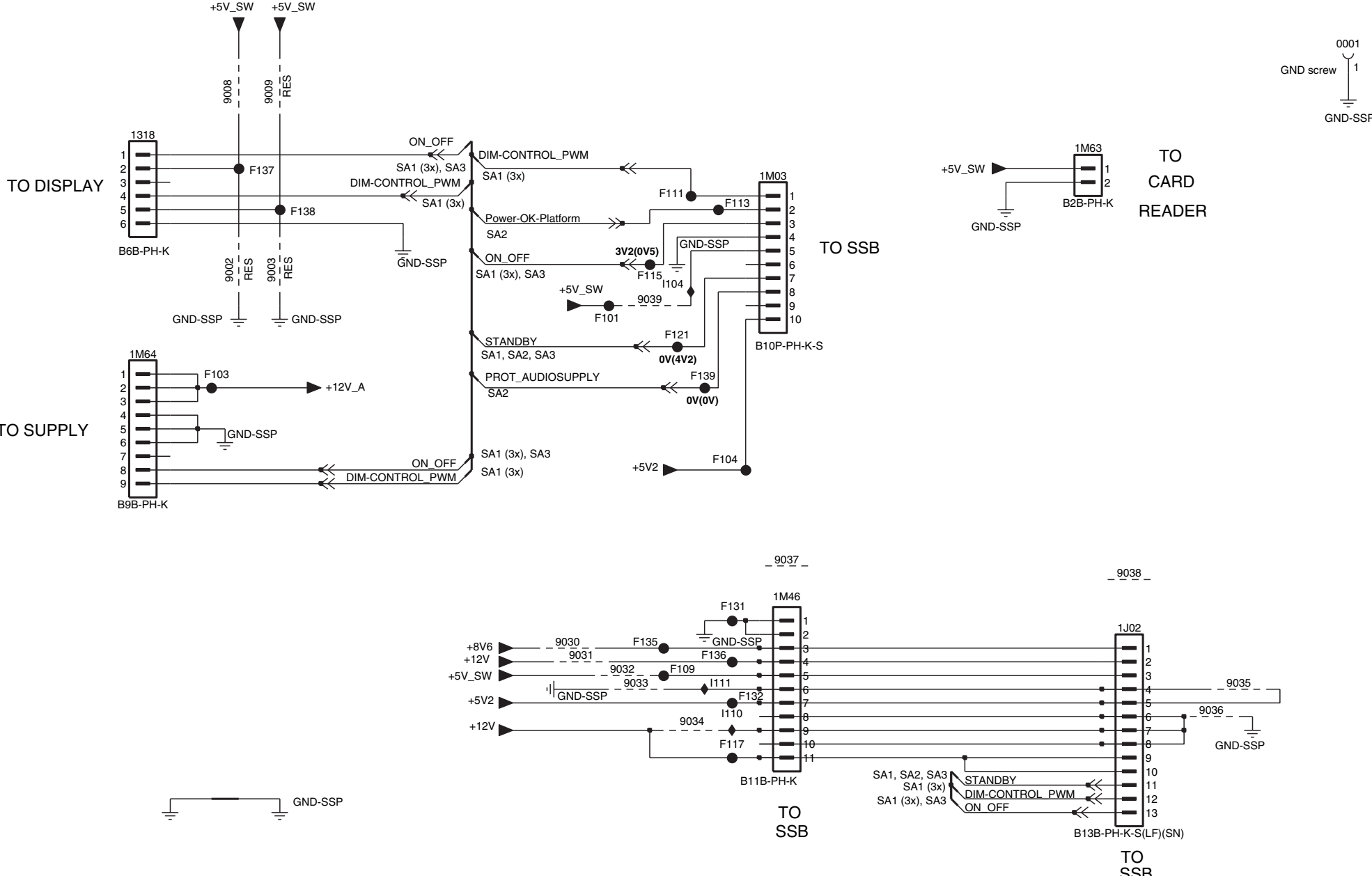
This image shows a full page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. In the bottom right corner, there is small black text that reads "E_06532_012.eps" and "131004".

E_06532_012.eps
131004

Stand-by & Audio Panel: Connections

SA1 CONNECTIONS

SA1



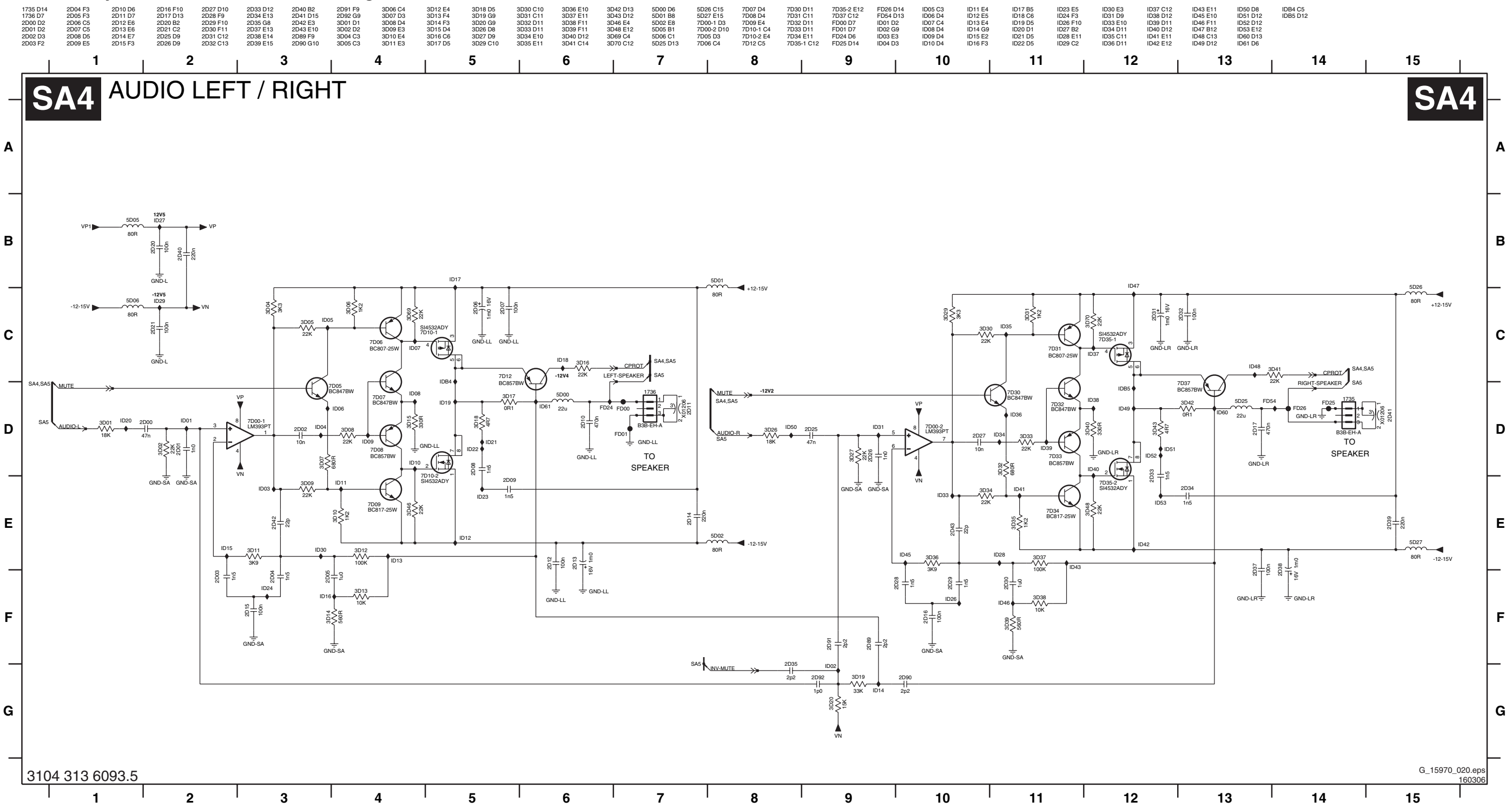
- 0001 A8
- 1318 B2
- 1J02 E7
- 1M03 B5
- 1M46 D5
- 1M63 B7
- 1M64 C2
- 9002 C2
- 9003 C2
- 9008 B2
- 9009 B2
- 9030 E4
- 9031 E4
- 9032 E4
- 9033 E4
- 9034 E4
- 9035 E7
- 9036 E7
- 9037 D5
- 9038 D7
- 9039 C4
- F101 C4
- F103 C2
- F104 D5
- F109 E4
- F111 B4
- F113 B5
- F115 C4
- F117 E5
- F121 C4
- F131 D5
- F132 E5
- F135 E4
- F136 E5
- F137 B2
- F138 B2
- F139 C5
- I104 C4
- I110 E5
- I111 E5

SA2 STANDBY

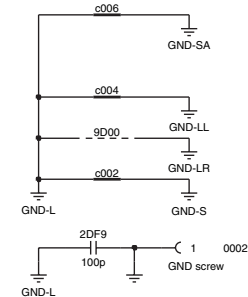
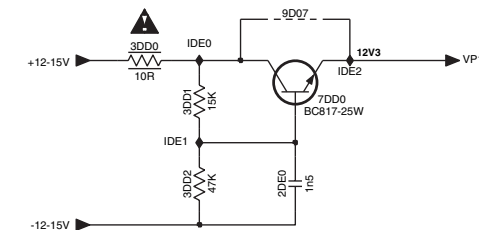
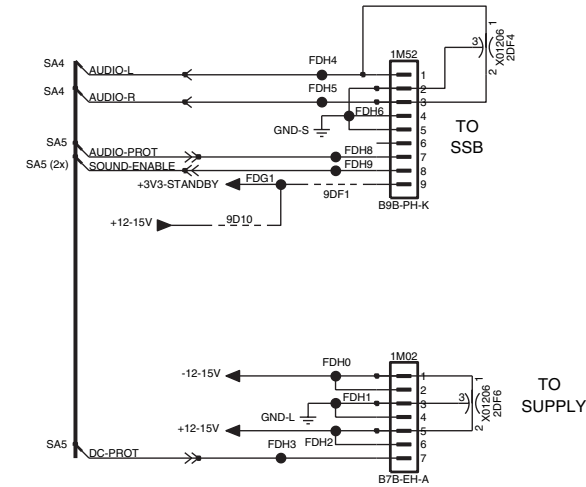
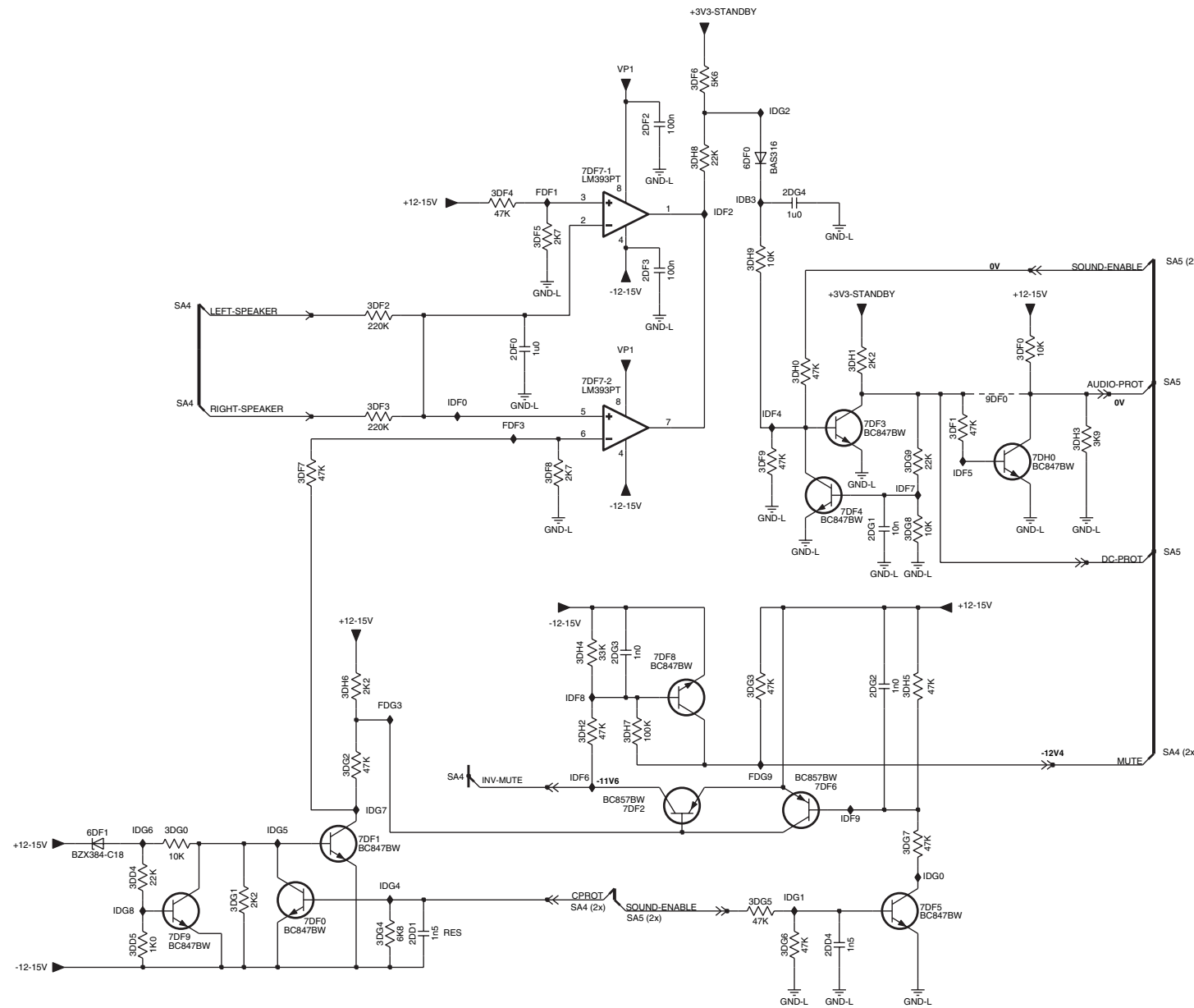


A	1301 B1	3541 G12	1311 E3
	1305 E13	3542 H13	1312 B3
	1306 B3	3543 D13	1313 D5
	1310 A12	3544 G12	1314 E3
	1311 A12	3560 F12	1335 E1
	2102 H1	3561 F12	1336 D5
	2103 H1	3562 F12	1337 E7
	2105 B5	3999 H8	1338 E7
	2106 B5	5103 F7	1339 E6
	2107 E5	5104 E5	1340 E2
B	2108 B5	5105 D5	1411 F2
	2109 G7	5106 F4	1412 E3
	2118 E7	5107 B1	1413 F3
	2129 C6	5108 D5	1444 F1
	2131 C10	5110 C6	1445 G2
	2132 C11	5112 D7	1446 G1
	2135 G8	5115 F7	1447 G6
	2501 E1	5500 C6	1448 F10
	2143 D7	5504 C3	1449 G8
	2154 E4	5505 C4	1500 F3
C	2152 C5	5506 E9	1511 F3
	2154 G10	5507 C10	1512 F2
	2160 D9	5508 C4	1513 G7
	2163 G3	6101 B4	1514 A11
	2501 E1	6102 B4	1515 A11
	2506 D6	6103 F3	1516 A8
	2507 C7	6105 D4	1517 F6
	2508 D7	6107 F7	1518 A8
	2509 G14	6109 B8	1519 F8
	2510 F8	6110 A8	1601 A7
D	2511 C9	6113 D7	1610 F9
	2512 B9	6115 F7	1612 F2
	2518 B9	6125 C9	1613 G9
	2522 B9	6130 C10	1614 C11
	2523 A10	6132 D10	1615 F3
	2523 F11	6133 D9	1616 F4
	2524 F8	6134 D9	1617 F4
	2535 E10	6140 E7	1618 G9
	2536 D12	6144 E2	1619 B2
	2537 D12	6147 E2	1711 F5
E	2538 B13	6148 F8	1712 B13
	2539 F8	6149 F9	1718 B13
	2540 H13	6503 D9	1719 H12
	2541 F8	6504 B7	1812 H13
	2544 H13	6505 F7	1816 B3
	3104 D3	6510 D14	1817 E11
	3106 F2	6513 B8	1818 D9
	3107 F2	6514 F2	1912 D13
	3109 E4	6531 F10	1917 D9
	3110 G7	6532 D11	1918 E7
F	3112 H1	6534 C13	1919 G15
	3113 G7	6535 C13	1904 E2
	3114 G6	6540 G12	1905 G13
	3122 C6	6562 F13	1906 G14
	3123 G7	7100 A9	1910 B10
	3124 F7	7101 F2	1911 D12
	3125 G2	7102 D4	1915 B8
	3126 F2	7131 C10	1919 B8
	3127 F4	7140 G10	1920 B9
	3128 G7	7501 F6	1921 A8
G	3132 E9	7503 D11	1922 A9
	3134 D11	7505 H13	1923 A10
	3135 D10	7506 F10	
	3137 C8	7507 D12	
	3139 C8	7509 H12	
	3140 D8	7510 G13	
	3141 G10	7511 G6	
	3142 G9	7512 A11	
	3146 F5	7513 B8	
	3148 F3	7514 A9	
H	3149 F2	7515 F10	
	3152 E3	7532 E9	
	3153 D8	7534 B14	
	3159 F8	7560 F12	
	3160 E4	9123 C3	
	3161 D10	9124 D14	
	3171 C8	1100 E4	
	3172 D10	1102 A4	
	3175 G8	1123 C3	
	3176 G10	1124 C3	
I	3502 D9	1125 E13	
	3503 E11	1126 E13	
	3504 E11	1131 B8	
	3506 H12	1134 B8	
	3507 G14	1100 C4	
	3508 D10	1101 B6	
	3510 G12	1102 B7	
	3511 C9	1103 C9	
	3512 D9	1105 C7	
	3513 E10	1106 D11	
J	3514 B7	1107 D8	
	3515 A11	1108 D9	
	3516 B10	1109 D11	
	3517 D11	1112 D10	
	3518 B7	1113 C4	
	3519 B8	1114 C6	
	3520 B7	1115 D12	
	3521 B8	1116 D10	
	3522 A9	1117 D12	
	3523 A9	1118 C5	
K	3524 A10	1119 C4	
	3528 C11	1120 C6	
	3529 D12	1211 D13	
	3530 D13	1222 D3	
	3531 D13	1223 D6	
	3532 C12	1224 D5	
	3534 C14	1225 D8	
	3535 B13	1226 D9	
	3536 B13	1227 C9	
	3538 G8	1228 D7	
L	3539 D14	1229 E7	
	3540 G13	1300 D3	

Stand-by & Audio Panel: Audio Left / Right



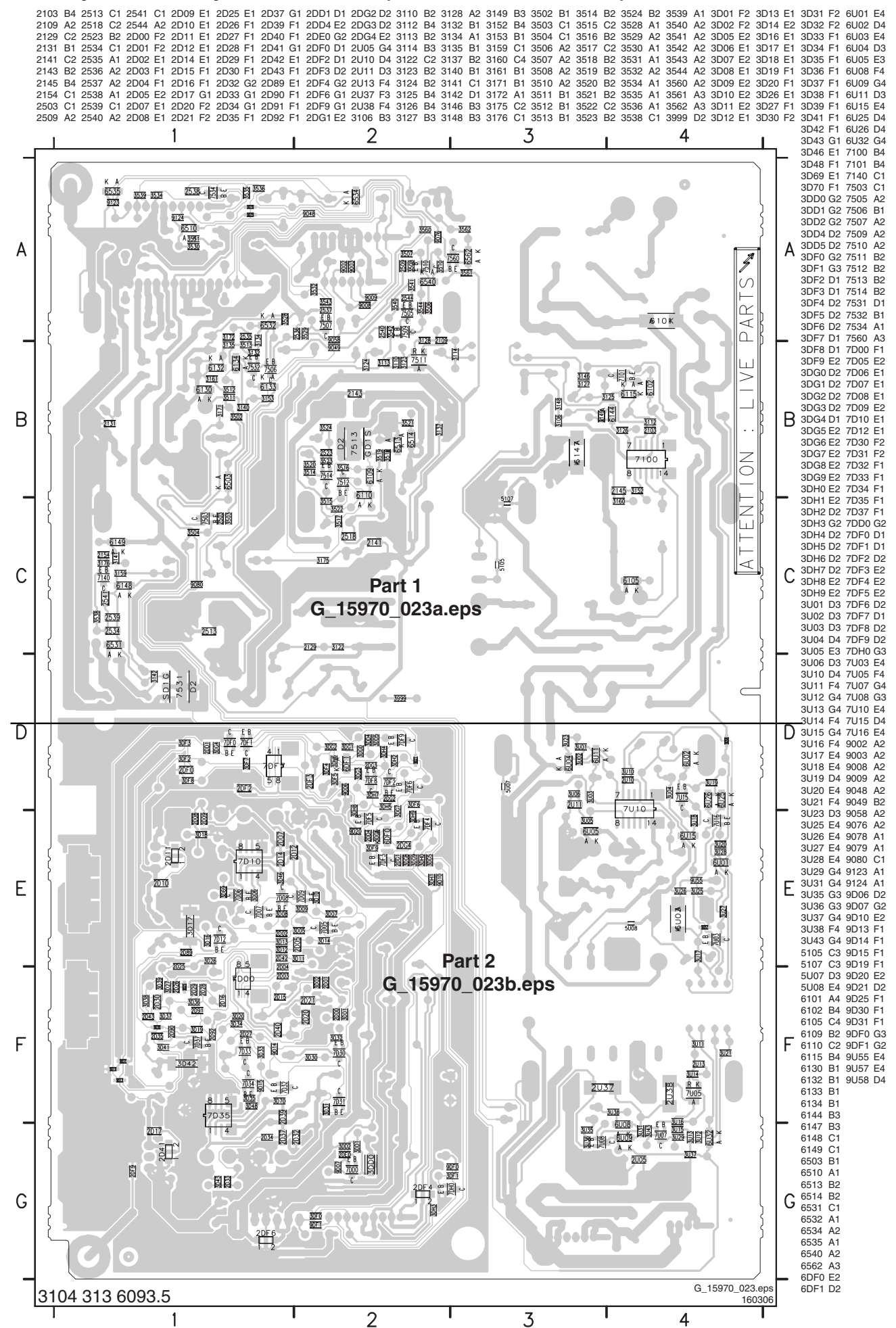
SA5 PROTECTION / MUTE CONTROL



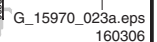
G_15970_021.eps
160306

0002 G12
1M02 C12
1M52 B12
2DD1 G3
2DD4 G6
2DE0 E12
2DF0 C4
2DF2 B5
2DF3 C5
2DF4 B12
2DF6 D12
2DF9 G11
2DG1 D6
2DG2 E6
2DG3 E5
2DG4 B6
3DD0 E11
3DD1 E11
3DD2 E11
3DD4 G1
3DG5 G1
3DF0 C7
3DF1 D7
3DF2 C3
3DF3 D3
3DF4 B4
3DF5 B4
3DF6 A5
3DF7 D3
3DF8 D4
3DF9 D5
3DG0 F2
3DG1 G2
3DG2 F3
3DG3 E5
3DG4 G3
3DG5 G5
3DG6 G6
3DG7 F6
3DG8 D6
3DG9 D6
3DH0 C6
3DH1 C6
3DH2 F4
3DH3 D7
3DH4 E4
3DH5 E6
3DH6 E3
3DH7 F5
3DH8 B5
3DH9 C5
6DF0 B5
6DF1 F1
7DD0 E12
7DF0 G3
7DF1 F3
7DF2 F5
7DF3 D6
7DF4 D6
7DF5 G6
7DF6 F6
7DF7-1 B4
7DF7-2 C4
7DF8 E5
7DF9 G2
7DH0 D7
9DD0 G11
9DD7 E12
9D10 C11
9DF0 C7
9DF1 C11
FDF1 B4
FDF3 D4
FDG1 B11
FDG3 E3
FDG9 F5
FDH0 C11
FDH1 D11
FDH2 D11
FDH3 D11
FDH4 B11
FDH5 B11
FDH6 B11
FDH8 B11
FDH9 B11
IDB3 B5
IDE0 E11
IDE1 E11
IDE2 E12
IDF0 D4
IDF2 B5
IDF4 D6
IDF5 D7
IDF6 F4
IDF7 D6
IDF8 E4
IDF9 F6
IDG0 G7
IDG1 G6
IDG2 B6
IDG4 G3
IDG5 F2
IDG6 F2
IDG7 F3
IDG8 G1
c002 G11

Layout Stand-by & Audio Panel (Overview Bottom Side)



D



G



4

[illegible]

8. Alignments

Index of this chapter:

- 8.1 General Alignment Conditions
- 8.2 Hardware Alignments
- 8.3 Software Alignments
- 8.4 Option Settings

Note: The Service Default Mode (SDM) and Service Alignment Mode (SAM) are described in chapter 5. Menu navigation is done with the CURSOR UP, DOWN, LEFT or RIGHT keys of the remote control transmitter.

8.1 General Alignment Conditions

Perform all electrical adjustments under the following conditions:

- Power supply voltage (depends on region):
 - AP-NTSC: 120 V_{AC} or 230 V_{AC} / 50 Hz (± 10%).
 - AP-PAL-multi: 120 - 230 V_{AC} / 50 Hz (± 10%).
 - EU: 230 V_{AC} / 50 Hz (± 10%).
 - LATAM-NTSC: 120 - 230 V_{AC} / 50 Hz (± 10%).
 - US: 120 V_{AC} / 60 Hz (± 10%).
 - Connect the set to the mains via an isolation transformer with low internal resistance.
 - Allow the set to warm up for approximately 15 minutes.
 - Measure voltages and waveforms in relation to correct ground (e.g. measure audio signals in relation to AUDIO_GND).
- Caution:** It is not allowed to use heatsinks as ground.
- Test probe: R_i > 10 Mohm, C_i < 20 pF.
 - Use an isolated trimmer/screwdriver to perform alignments.

8.1.1 Initial Settings

Press the "Menu" button on the RC. Select "TV menu", "TV settings" and then "Picture". Change the following initial setting in order to perform all electrical adjustments:

1. Set "Active Control" to "Off".
2. Set "Light sensor" to "Off".

8.1.2 Alignment Sequence

- First, set the correct options:
 - In SAM, select "Options", and then "Option numbers".
 - Fill in the option settings for "Group 1" and "Group 2" according to the set sticker (see also paragraph "Option Settings").
 - Press OK on the remote control **before** the cursor is moved to the left.
 - In submenu "Option numbers" select "Store" and press OK on the RC.
 - In main menu, select "Store" again and press OK on the RC.
 - Switch the set to STAND-BY.
- Warming up (>15 minutes).
- White-D alignment.

8.2 Hardware Alignments

Not applicable.

8.3 Software Alignments

Put the set in SAM mode (see Chapter 5 "Service Modes, Error Codes and Fault Finding"). The SAM menu will now appear on the screen. Select ALIGNMENTS and go to one of the sub menus. The alignments are explained below.

Notes:

- All changes must be stored manually.
- If an empty NVM (permanent memory) is detected, all settings are set to pre-programmed default values.

With the software alignments of the Service Alignment Mode (SAM), "Tuner AGC", "Tuner IF PLL Offset" and the "Whitepoint" settings can be aligned.

To store the data:

- Press OK on the RC **before** the cursor is moved to the left.
- In main menu select "Store" and press OK on the RC.
- Press MENU on the RC to switch back to the main menu.
- Switch the set to STAND-BY mode.

For the next alignments, supply the following test signals via a video generator to the RF input:

- **EU/AP-PAL** models: a PAL B/G TV-signal with a signal strength of at least 1 mV and a frequency of 475.25 MHz
- **US/AP-NTSC** models: an NTSC M/N TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).
- **LATAM** models: an NTSC M TV-signal with a signal strength of at least 1 mV and a frequency of 61.25 MHz (channel 3).

8.3.1 Adjacent channel sound trap (40.4 MHz)

Purpose: to avoid sound of adjacent channel in picture.

This alignment can only be executed in sets equipped with the hybrid TD1316AF tuner (use RF sweep generator, spectrum analyser and active probe):

- Apply sweep generator to antenna. Tune to any frequency, e.g. 154.25 MHz. Sweep from appr. 151.25 MHz to 154.25 MHz. Level must be low (e.g. 45 dBμV) in order to avoid AGC effect.
- Sweep from appr. 151.25 MHz to 154.25 MHz. Level must be low (e.g. 45 dBμV) in order to avoid AGC effect.
- Connect active probe of spectrum analyser to test point AC05.
- Turn the core of coil 5C70 until notch frequency is at 40.75 MHz.

8.3.2 Tuner AGC

Purpose: To keep the tuner output signal constant as the input signal amplitude varies.

This chassis comes with two tuner types: the UV1318S for the analogue sets and the TD1316AF for the hybrid sets. For further details refer to chapter 9 "Circuit descriptions, Abbreviation List, and Data Sheets". For the digital tuner TD1316AF, no AGC alignment is necessary, as the AGC alignment is done automatically (standard value: "32"), even during analogue reception. The analogue tuner UV1318S however needs to be aligned as follows (use spectrum analyser and RF generator):

- Warm up set for a short period.
- Tune set to 203.25 MHz.
- Apply unmodulated carrier of 203.25 MHz (70 dBμV) to antenna input.
- Measure IF-output of the tuner (pin 11) with active probe and spectrum analyser.
- Adjust AGC (via SAM menu), until measured level is less or equal to 103 dBμV (6-bit register, typical value is 42 dec).
- Store settings and quit SAM.

8.3.3 IF PLL Offset

The IF PLL Offset value needs to be realigned in case the MPIF and/or the NVM have been replaced. This is not necessary in case only the tuner has been replaced. Default values are:

- For PAL B/G: 40
- For SECAM L: 32

In case the result is not satisfying (distortion in sound and/or discolouration in left and right part of the picture), use the following method to align the IF PLL Offset value:

- Switch set "off".
- Disconnect speakers and connect a resistor of 1 k Ω instead.
- Connect AC voltmeter at resistor.
- Switch set on.
- Put "Volume" at maximum.
- Align PLL until voltage is at minimum.

In case the minimum value on the AC voltmeter is found in a range of IF PLL Offset values, the value should be taken that is in the middle of this range.

8.3.4 White Point

- Set "Active control" to "Off" as earlier described.
- Choose "TV menu", "TV Settings" and then "Picture" and put:
 - "Dynamic contrast" to "Off".
 - "Colour enhancement" to "Off".
 - "Light sensor" to "Off".
 - "Clear LCD" to "On" where applicable.
 - "Colour" to "0".
 - "Contrast" to "100".
- Go to the SAM and select "Alignments" -> "Whitepoint".

White point alignment:

- Use a 100% white screen as input signal and set the following values:
 - "Colour temperature": "Normal".
 - All "Whitepoint" values to: "127".
 - "Red BL offset" and "Green BL offset" values to "8".

In case you have a colour analyser:

- Measure with a calibrated (phosphor- independent) colour analyser in the centre of the screen. Consequently, the measurement needs to be done in a dark environment.
- Adjust the correct x,y coordinates (while holding one of the White point registers R, G or B on 127) by means of decreasing the value of one or two other white points to the correct x,y coordinates (see table "White D alignment values"). Tolerance: dx: ± 0.004 , dy: ± 0.004 .
- Repeat this step for the other colour Temperatures that need to be aligned.
- When finished press OK on the RC and then press STORE (in the SAM root menu) to store the aligned values to the NVM.
- Restore the initial picture settings after the alignments.

If you do not have a colour analyser, you can use the default values. This is the next best solution. The default values are average values coming from production (statistics).

- Select a COLOUR TEMPERATURE (e.g. COOL, NORMAL, or WARM).
- Set the RED, GREEN and BLUE default values according to the values in the "Tint settings" table.
- When finished press OK on the RC, then press STORE (in the SAM root menu) to store the aligned values to the NVM.
- Restore the initial picture settings after the alignments.

Table 8-1 Tint settings 32" LCD version

Colour Temp.	R	G	B
Cool	104	127	117
Normal	115	127	109
Warm	127	120	80

Table 8-2 Tint settings 37" LCD version

Colour Temp.	R	G	B
Cool	104	126	127
Normal	116	127	118
Warm	127	118	87

Table 8-3 Tint settings 42" LCD version

Colour Temp.	R	G	B
Cool	127	120	122
Normal	127	112	105
Warm	127	95	68

Note: These values were not available at the time of writing, therefore they come from an early production sample (for indication only). As soon as the production data become available, a Service Info or Service Manual update will be issued via the appropriate channels.

8.4 Option Settings

8.4.1 Introduction

The microprocessor communicates with a large number of I²C ICs in the set. To ensure good communication and to make digital diagnosis possible, the microprocessor has to know which ICs to address. The presence / absence of these specific ICs (or functions) is made known by the option codes.

Notes:

- After changing the option(s), save them by pressing the OK button on the RC **before** the cursor is moved to the left, select STORE in the SAM root menu and press OK on the RC.
- The new option setting is only active after the TV is switched "off" and "on" again with the Mains switch (the NVM is then read again).

8.4.2 Dealer Options

For dealer options, in SAM select “Dealer options” and then “Personal options”.

Table 8-4 Dealer options

Menu item	Subjects	Options	Description
Personal Options	Virgin Mode	On	TV starts up (once) with a language selection menu after the Mains switch is turned "on" for the first time (virgin mode)
		Off	TV does not start up (once) with a language selection menu after the Mains switch is turned "on" for the first time (virgin mode)
	Autostore Mode	None	Determines where the set distracts the information from for the autostore functionality
		PDC/VPS	
		TXT page	
		PDC/VPS/TXT	

8.4.3 (Service) Options

Select the sub menu's to set the initialization codes (options) of the set via text menus.

Table 8-5 Service options

Menu-item	Subjects	Options	Description
PIP/DS	Dual Screen	None	no DS
		One tuner dual screen	one tuner DS
		Two tuner dual screen	two tuner DS
Data	EPG	-	Electronic Program Guide
Display	Screen	“Value”	Used screen size, type, and resolution
	Clear LCD	On / Off	Feature present / not present
	Dimming Backlight	On / Off	Feature present / not present
Video Repro	Picture Processing	Spider	Feature present
	Combfilter	None / 2D / 3D	
	Ambient Light	Off / Mono / Stereo / Triple / Quad	Inverter not present / one inverter / two inverters / three inverters / four inverters
	Pacific 3	On	Feature present
	MOP	Off / On	Feature present / not present
	Light sensor	Off / On	Sensor active / not active
Source Selection	EXT1 type	CVBS RGB	
	EXT2 type	CVBS Y/C RGB P50	
	EXT3 type	YPbPr	
	EXT4 type	None	
	HDMI 1	None	No HDMI
		With analogue audio	DVI
		Without analogue audio	HDMI
	HDMI 2	None	No HDMI
		With analogue audio	DVI
		Without analogue audio	HDMI
	USB version	2.0 + CR	USB 2.0 in cardreader panel
	Ethernet	Off / On	Connector not present / present
	VGA	On	
	S/PDIF inputs	1 connector	1 connector present (in)

Menu-item	Subjects	Options	Description
Audio Repro	Acoustic System (Cabinet design, used for setting dynamic audio parameters).	None	
		Entry ME5 5W	
		Entry ME5 15W	
		(Soft) Wrap	
		Top	
		Entry+	
		Eco ME5 5W	
		Eco ME5 15W	
		Eco ME6	
		Top-A 2K6	
		ME5P 2K6	
		Step Top-B EUR AP 2K6 32	
		Step Top-B EUR AP 2K6 37+	
		Step Top-B Open 2K6	
		MEG 2K6	
		51 WMAG	
		51 PHIL	
		60 PHIL	
		MEG ECO Slim	
	Centre mode support	Off	Feature present / not present
	Inverted Class D amplifier	Yes / No	Right audio channel (coming from the PNX2105) inverted / not inverted. Only inverted ('Yes') in sets who use the 2k6 audio panel.
Miscellaneous	Region	Europe / AP-PAL-MULTI	
	ATSC / DVB-T	On / Off	
	DVB-T installation	Off / Country dependent / On	
	Alternative tuner	Philips	Tuner brand
	Tuner type	UV1318 / TD 1316	Tuner type
	AGC amplifier	Other / Sanyo	
	Hotel mode	Off	
	Video playback	On	
	Connected planet	On / Off	
Opt. no.	Group 1		xxxxx xxxxx xxxxx xxxxx (see set sticker)
	Group 2		xxxxx xxxxx xxxxx xxxxx (see set sticker)
	Store	Store	

8.4.4 Opt. No. (Option numbers)

Select this sub menu to set all options at once (expressed in two long strings of numbers).

An option number (or "option byte") represents a number of different options. When you change these numbers directly, you can set all options very quickly. All options are controlled via eight option numbers.

When the NVM is replaced, all options will require resetting. To be certain that the factory settings are reproduced exactly, you must set both option number lines. You can find the correct option numbers on a sticker inside the TV set.

Example: The options sticker gives the following option numbers:

- 04368 00005 01066 08707
- 00000 00032 00512 00000

The first line (group 1) indicates hardware options 1 to 4, the second line (group 2) indicates software options 5 to 8. Every 5-digit number represents 16 bits (so the maximum value will be 65536 if all options are set).

When all the correct options are set, the sum of the decimal values of each Option Byte (OB) will give the option number. See next table for the option overview.

Important: after having edited the option numbers as described above, you **must** press OK on the remote control **before** the cursor is moved to the left!

Table 8-6 Option code overview

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
1	0 (1)	Video Repro	Picture Processing	0= No Spider, 1= Spider	Spider availability, influences, digital options.
	1 (2)				
	2 (4)		Comb Filter	0= None, 8= 2D Comb (Columbus without DRAM), 16= 3D Comb (Columbus with DRAM)	
	3 (8)				
	4 (16)		Ambient Light	0= None, 32=Ambi-light Mono, 64= Ambi-light Stereo, 96 = Ambi-light Triple, 128 = Ambi-light Quattro	
	5 (32)				
	6 (64)		Dual Screen	0= None, 256= One Tuner DS, 512= Two Tuner DS	
	7 (128)				
	8 (256)		MOP	0= Off, 1024= On	Matrix Output Processor.
	9 (512)		JOP	0= Off, 2048= On	Jaguar Output Processor.
	10 (1024)		POD	0= Off, 4096= On	
	11 (2048)				
	12 (4096)				
	13 (8192)	n.a.			
	14 (16384)				
	15 (32768)				
2	0 (1)	Cabinet Type	Cabinet Type	0= None, 1= Entry_ ME5_5W, 2= Entry_ ME5_15W, 3= (Soft)Wrap, 4= Top, 5= Entry+, 6= ME5_5W Eco, 7= ME5_15W Eco, 8= ME6 Eco, 9= TopA 2K6, 10= ME5P 2K6, 11= TopBStep32Box 2K6, 12= TopBStep37PlusBox 2K6, 13= TopBStepOpen 2K6, 14= ME6 2K6, 15= 51WMAG, 16= 51PHIL, 17= 60PHIL, 18 = MEG ECO Slim, 19= Others	Cabinet design, used for setting dynamic audio parameters.
	1 (2)				
	2 (4)				
	3 (8)				
	4 (16)				
	5 (32)	n.a.			
	6 (64)				
	7 (128)				
	8 (256)	Sound Repro	Inverted Class D	0= Not Inverted, 256= Inverted	
	9 (512)		Subwoofer Internal	0= Off, 512= On	
	10 (1024)	Centre Mode Support	Centre Mode Support	0= Not Supported, 1024= Supported	
	11 (2048)	n.a.			
	12 (4096)				
	13 (8192)				
	14 (16384)				
	15 (32768)				
3	0 (1)	Source Select	HDMI1	0= None (no HDMI), 1= With analogue audio (DVI), 2= Without analogue audio (HDMI)	read-only
	1 (2)		HDMI2	0= None(no HDMI), 4= With analogue audio (DVI), 8= Without analogue audio (HDMI)	read-only
	2 (4)		Video Playback	0= Off, 16= On	
	3 (8)		USB Version	0= None, 32= USB 1.1, 64= USB 2.0 + Card reader	USB support.
	4 (16)		IEEE1394	0= Not Present, 128= Present	
	5 (32)		Ethernet	0= LAN not present, 256= LAN present	
	6 (64)		RRT	0= Off, 512= On	Regional Rating Table (RRT)
	7 (128)		S/PDIF Inputs	0= None, 1024= 1 Connector, 2048= 2 Connectors	
	8 (256)		VGA	0= Off, 1= On	
	9 (512)		n.a.		
	10 (1024)				
	11 (2048)				
	12 (4096)				
	13 (8192)				
	14 (16384)				
	15 (32768)				
4	0 (1)	Region	Region	0= EU, 1= AP-P, 2= AP-N, 3= US, 4= Latam	
	1 (2)				
	2 (4)				
	3 (8)	Interconnect	China IF	0= Off, 8= On	Tuner make.
	4 (16)		Alternative Tuner	0= Philips, 16= Alps	
	5 (32)		Tuner Type	0= TD1336s (B-Chassis US), 32= TD1331(J-Chassis US), 64= UV1318 (analogue EU), 96= TD1316 (Hybrid EU)	
	6 (64)	Amplifier Type	Amplifier Type	0= NEC, 128= Sanyo	
	7 (128)				

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
	8 (256)	Source select	AV1	0= CVBS/RGB, 256= CVBS/YC/YPbPr/HV/LR, 512= CVBS/YC/LR, 768= CVBS/YPbPr/LR	Input type.
	9 (512)				
	10 (1024)		AV2	0= CVBS/YC/RGB/P50, 1024= CVBS/YC/LR, 2048= CVBS/YPbPr/LR, 3072= CVBS/YC/YPbPr/LR	Input type.
	11 (2048)				
	12 (4096)		n.a.		
	13 (8192)		n.a.		
	14 (16384)		AV4	0= Not Available, 16384= YPbPr, 32768= YPbPr/LR	Input type.
	15 (32768)				
5	0 (1)	Display	Screen	see Table "Display code overview" in Chapter "Service Modes" for the values	Screen size, type, and resolution.
	1 (2)				
	2 (4)				
	3 (8)				
	4 (16)				
	5 (32)				
	6 (64)				
	7 (128)				
	8 (256)		Light sensor	0= Off, 256= On	
	9 (512)		Contrast Reduction	0= Off, 512= On	
	10 (1024)		Dimming Backlight	0= Off, 1024= On	
	11 (2048)		Clear LCD	0= Off, 2048= On	
	12 (4096)	AV3Union	Europe & AP	0= CVBS, 4096= YPbPr, 8192= YPbPr/LR, 12288= YPbPr/LR/HV	
	13 (8192)				
	14 (16384)		US	0= YPbPr, 16384= CVBS/YC/LR	
	15 (32768)	Logo	Logo	0= Off, 32768= On (default)	
6	0 (1)	Miscellaneous	n.a.		
	1 (2)		n.a.		
	2 (4)		n.a.		
	3 (8)		n.a.		
	4 (16)		n.a.		
	5 (32)		n.a.		
	6 (64)		Proximity Sensor	0= Off, 64= On	
	7 (128)		n.a.		
	8 (256)		DVB-T installation	0= Off, 256= Country dependent, 512= On	
	9 (512)				
	10 (1024)		n.a.		
	11 (2048)		n.a.		
	12 (4096)		n.a.		
	13 (8192)		n.a.		
	14 (16384)		n.a.		
	15 (32768)		n.a.		
7	0 (1)	Personal	Self Learning TV	0= Off, 1= On	Fixed to: "None" in the AP-N and US versions.
	1 (2)		Auto Store Mode	0= None, 2= PDC/VPS, 4= TXT Page, 6= PDC/VPS/TXT Page	
	2 (4)				
	3 (8)		2CS Korea	0= Off, 8= On, 16= Auto	
	4 (16)				
	5 (32)		Picture Mute	0= Off, 32= On	
	6 (64)		n.a.		
	7 (128)		Virgin Mode	0= Off, 128= On	
	8 (256)	Hotel Mode		0= Off, 256= On	
	9 (512)	Content Browser		0= Not Present, 512= Present	
	10 (1024)	Connected Planet		0= Off, 1024= Full Connected Planet + logo support	
	11 (2048)				
	12 (4096)	ATSC/DVB-T		0= Off, 4096= On	
	13 (8192)	IR Blaster		0= Off, 8192= On	
	14 (16384)	EPG		0= Off, 16384= On	
	15 (32768)	TV Guide USA (Gemstar)		0= Off, 32768= On	
8	0 (1)	n.a.	n.a.		

Byte	Bit (dec. value)	Subject	Options	Settings (in decimal values)	Remarks
	1 (2)	n.a.	n.a.		
	2 (4)	n.a.	n.a.		
	3 (8)	n.a.	n.a.		
	4 (16)	n.a.	n.a.		
	5 (32)	n.a.	n.a.		
	6 (64)	n.a.	n.a.		
	7 (128)	n.a.	n.a.		
	8 (256)	n.a.	n.a.		
	9 (512)	n.a.	n.a.		
	10 (1024)	n.a.	n.a.		
	11 (2048)	n.a.	n.a.		
	12 (4096)	n.a.	n.a.		
	13 (8192)	n.a.	n.a.		
	14 (16384)	n.a.	n.a.		
	15 (32768)	n.a.	n.a.		

9. Circuit Descriptions, Abbreviation List, and IC Data Sheets

Index of this chapter:

- 9.1 Introduction
- 9.2 LCD Power Supply
- 9.3 Front-End
- 9.4 DC/DC Converters (SSB)
- 9.5 Inputs
- 9.6 Common Interface (CI)
- 9.7 MPIF (PNX 3000)
- 9.8 PNX2015
- 9.9 SPIDER (T6TE0TBG).
- 9.10 VIPER 2 (PNX 8550)
- 9.11 Back-end
- 9.12 Ambient Light
- 9.13 Abbreviation List
- 9.14 IC Data Sheets

Notes:

- Only **new** circuits (circuits that are not published recently) are described.
- Figures can deviate slightly from the actual situation, due to different set executions.
- For a good understanding of the following circuit descriptions, please use the wiring, block (chapter 6) and circuit diagrams (chapter 7). Where necessary, you will find a separate drawing for clarification.

- AVIP/COLUMBUS (PNX2015).
- SPIDER (T6TE0TBG).
- VIPER 2 (PNX8550).
- FPGA (EPLD or MOP).
- PACIFIC 3 (T6TF4HFG-0002).

9.1.1 Features

The main features for this chassis are:

- Fit for both analogue and digital signal processing, this by converting analogue signals into digital transport streams and allowing seamless zapping between all possible signal sources. This makes the chassis applicable for e.g. receiving DVB-T in an integrated product form.
- AmbiLight: a unique technology that, in real-time, analyses incoming television signals and produces background lighting that matches the images displayed on the screen.
- The internal digital processing allows new "Multi-Media" applications such as Content Browser, Memory Card Slot, Local Area Network support and all kinds of streaming applications.
- The chassis can be upgraded in the future with internal functionality such as Personal Video Recording, DVD/RW, MPEG playback.

The Pacific 3 provides Pixel Plus in all models. This ensures additional sharpening, and contrast and colour enhancements to the picture.

9.1 Introduction

This chassis (development name "Jaguar ") is: The move from the analogue world to the digital world. W.o.w. from signal processing via "hardware circuits" to signal processing via "software algorithms". This means: no software = no picture and sound!

Some key components are:

- Common Interface (CI) circuitry (only for digital sets).
- MPIF (PNX3000).

9.1.2 Jaguar Architecture Overview

For details about the chassis block diagrams refer to chapter "Block diagrams, Test Point Overview, and Waveforms". An overview of the Jaguar architecture can be found in figure "Architecture of Full Jaguar with Spider".

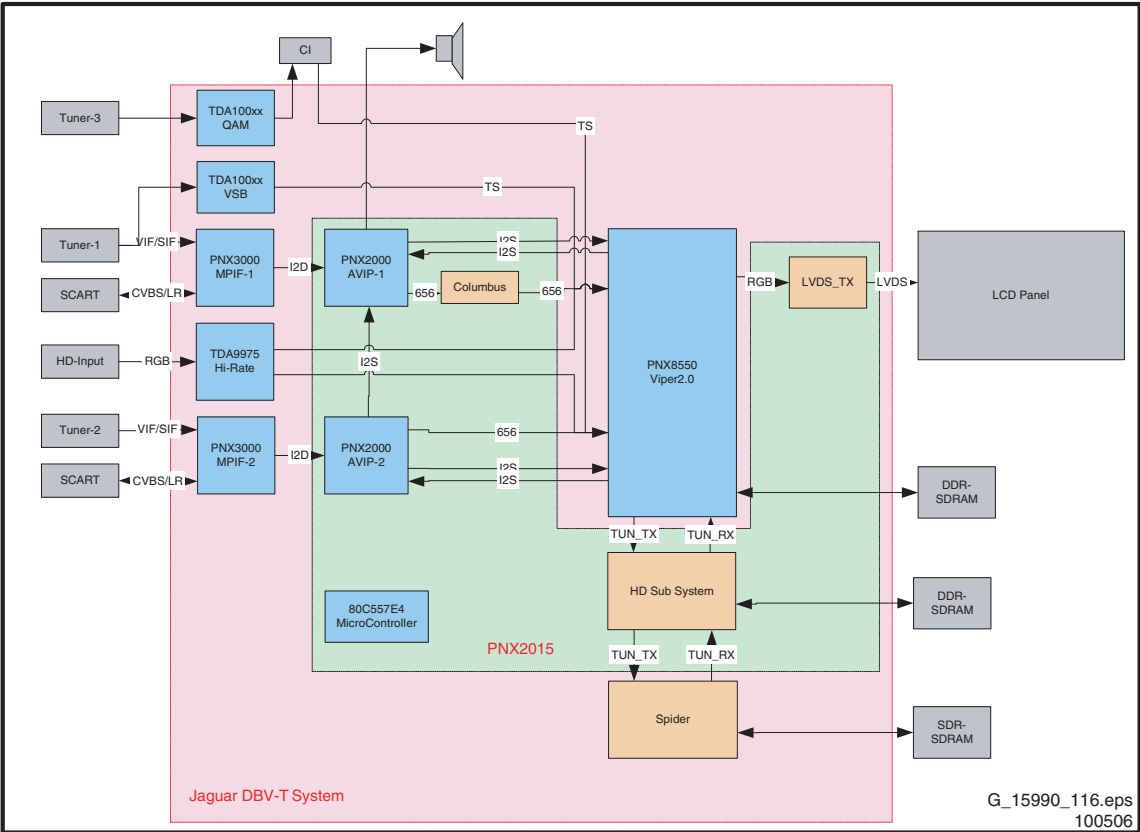


Figure 9-1 Architecture of Full Jaguar with Spider

Tuner diversity

The SSB can be equipped with two tuners: the main tuner TD1316AF and the sub tuner UV1318ST. The main tuner can receive digital and analogue signals, whereas the sub tuner can only receive analogue signals. Some sets are only equipped with an analogue tuner. Refer to chapter 9.3 "Front-End" for details.

Analogue Reception

The TV receives multimedia information by tuning to one of many 6 MHz input channels available via a cable connection. When the input channel is an analogue channel, the signal is processed via the PAL/SECAM decoder and the VBI data decoder.

Digital Reception

The CI module consists of the following functional blocks: Conditional Access (Module (CAM), Out of Band part, and buffering. These blocks are interfacing with the DVB-T In Band (IB) channel decoder and Out of Band (OOB) channel decoder. The interface is connected to the VIPER. Also the Common Interface outgoing Transport Stream (TS) is routed to the VIPER.

The TV receives multimedia information by tuning to one of many 6 MHz input channels available via a cable connection. When the input channel is a digital channel, it is processed via the QAM demodulator and then passed to the Common Interface device (CI) where secure and scrambled information is processed. Non-scrambled information is passed through the CAM to the MPEG-2 Transport Demultiplexer. When the CAM is not inserted, the output of the QAM demodulator is routed directly to the MPEG-2 Transport Demultiplexer. The multi-media processor (VIPER) handles the synchronization and display of audio-visual material.

The OpenCable Host Device also receives control information and other data by tuning to an Out-Of-Band (OOB) Forward Data Channel (FDC) channel. The terminal will remain tuned to the OOB Forward Data Channel (own tuner) to continuously receive information. This information is passed to the CAM for processing, and relevant information is passed back to the TV.

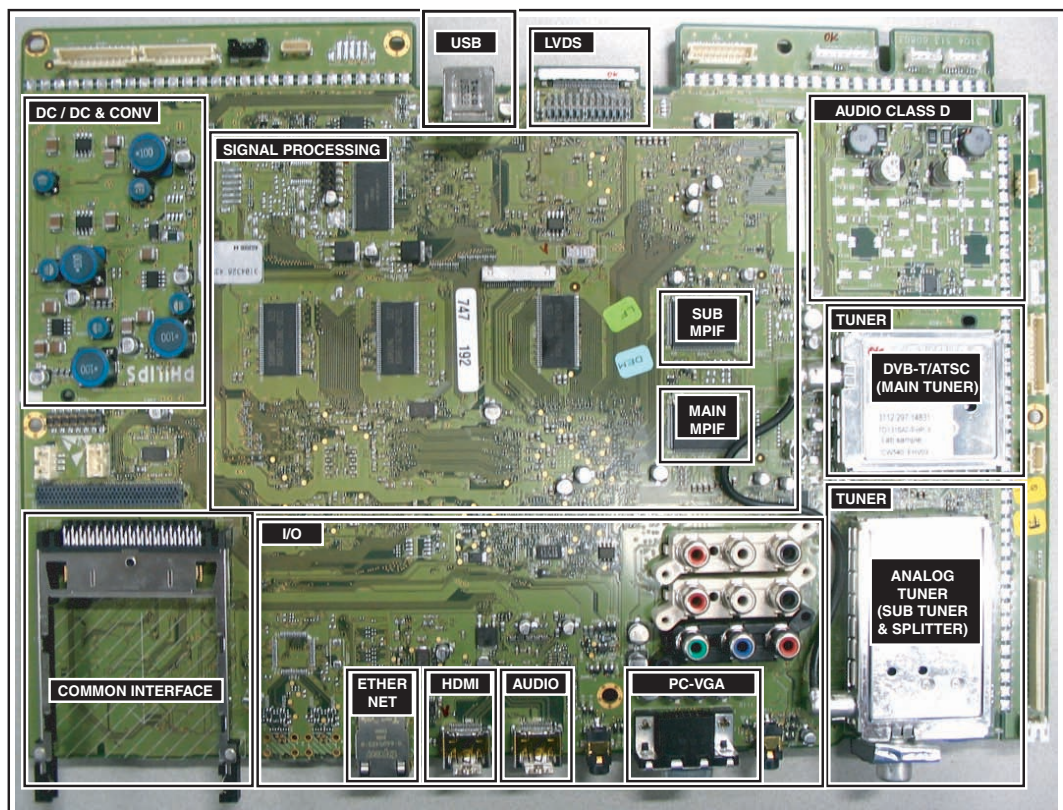
Signal Processing

The AVIP together with the MPIF device is used to perform the input decoding of a single stream of analogue audio and video broadcast signals. In addition, the AVIP is used for decoding and presentation of audio output streams. The main data connection between MPIF and AVIP is done via an I²D bus. The AVIP converts the incoming video data to ITU-656 format for communication to the VIPER IC. The audio data is transferred between the AVIP and VIPER using I²S.

The AVIP IC is controlled by the VIPER via the I²C bus.

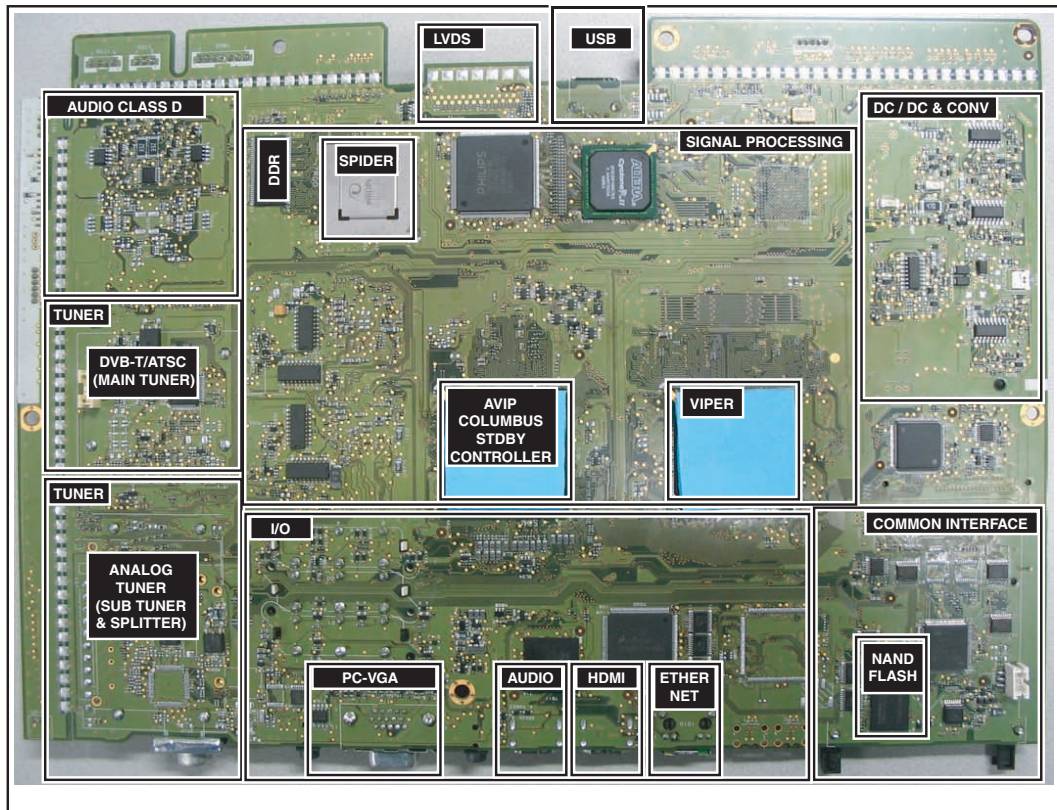
The key part in the system, the VIPER, performs almost all key features, like video quality enhancement, motion compensation, picture-in-picture processing, and others. It is a completely digital IC with a TriMedia DSP (Digital Signal Processor) core and a MIPS microcontroller core. The DSP and some additional cores are used to do the video feature processing and some auxiliary sound feature processing. The MIPS microcontroller core is used for all internal and external controlling tasks including a system wide I²C bus.

The VIPER provides a primary digital (YUV or RGB) output to the Pacific 3, which on his turn processes the data to the LVDS transmitter. For models with the AmbiLight feature, an FPGA is connected between VIPER output and LVDS Transmitter input. This FPGA (or EPLD or MOP) is used for the AmbiLight processing and some picture enhancements.

9.1.3 SSB Cell Layout

G_15990_120.eps
100506

Figure 9-2 SSB top view



G_15990_121.eps
100506

Figure 9-3 SSB bottom view

9.2 LCD Power Supply

9.2.1 Introduction

For a general description of the LCD Power Supply Unit (all displays) see the BL2.xU Service Manual.

For the 32" LCD set the main differences with this previous chassis are:

- Supply Unit delivers 24 V and 295 V supply for display. Layout, trafo, diodes and elco's have changed.

- 12 V for Top AmbiLight (if present).
- +/- 12 V supply for audio class D amplifier, except for US sets, where the supply voltage for audio class D amplifier is the same as in BL2.xU chassis (+/- 18 V).
- Mains overvoltage protection circuit, situated on MF supply panel, is latched to stop the supply. After that, a 12 V drop causes a software protection.
- The 24 V supply is separately stabilized with a MOSFET. The 295 V supply is stabilized on the 12 V supply. There is a mutual influence of less than 5 %.
- Extended display connectivity.

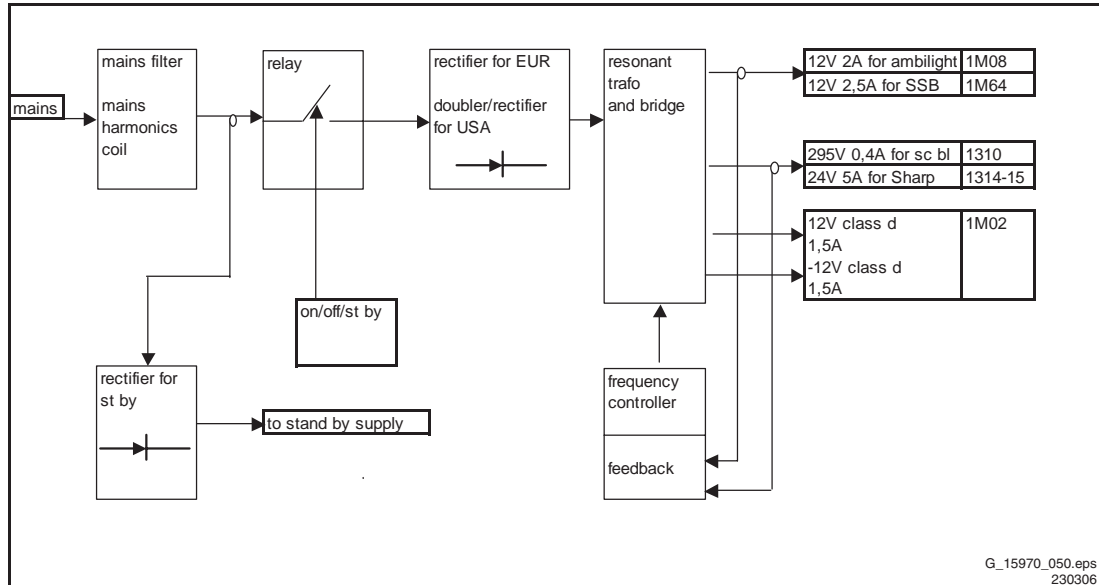


Figure 9-4 Block diagram LCD Power Supply 32"

For the 37" LCD set the main differences with the BL2.xU chassis are:

- Supply Unit delivers only 24 V for display and 12 V for Top AmbiLight (if present). No power supply for SSB and audio panel. Changed architecture. Separate platform and display supply but merged on the same board for cost reasons.
- On BL2.xU chassis the correct working of the 12 V supply was sensed on the SSB, whereas in this chassis a so-called Power-Good line indicates the correct functioning of

the 12 V and 24 V supply. This is polled by the UPROC (PNX).

- Mains overvoltage protection shuts down the supply: Power-Good goes low.
- Supply is stabilized on the 24 V supply. The 12 V supply fluctuates with the load on the 24 V supply however this is not critical.
- Extended display connectivity.

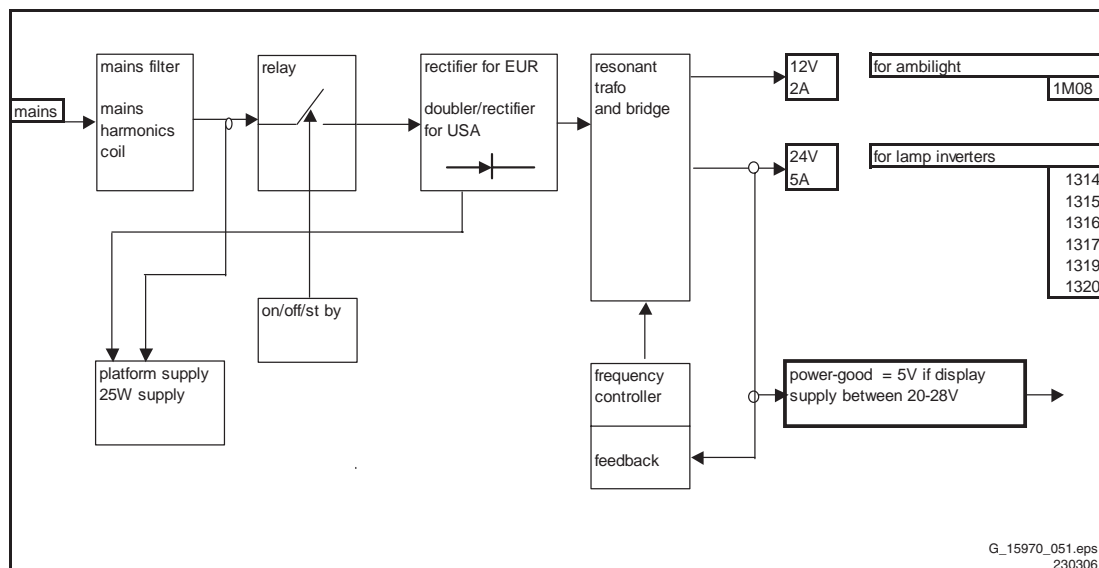


Figure 9-5 Block diagram LCD Power Supply 37"

9.3 Front-End

Main goal of the front-end module is to connect the host (core with source processing) with the outside world via an RF connector.

- This chassis comes with three different front-end executions:
- For dual window DVB-T and analogue sets: two tuners (an analogue and a hybrid one).
 - For non-dual window DVB-T sets: an empty analogue box and a hybrid tuner.

- For non-dual window analogue sets: only one analogue tuner.

9.3.1 Dual window applications (DVB-T and analogue sets)

The 37PF9731D/10 and 42PF9741D/10 digital (hybrid) sets and the 37PF9731/69 and 42PF9831/69 analogue sets use the UV1318ST analogue (sub)tuner **and** the TD1316AF hybrid (main)tuner. See figure “Block diagram dual window front-end (hybrid and analogue sets)” for details.

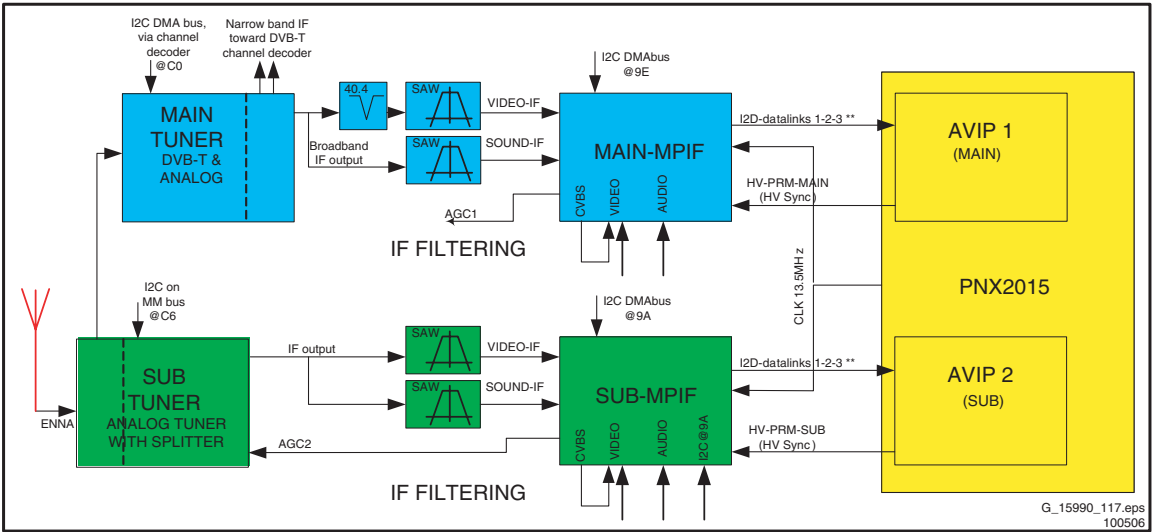


Figure 9-6 Block diagram dual window front-end (hybrid and analogue sets)

9.3.2 Non-dual window DVB-T applications

The 32PF9631D/10 and 32PF9731D/10 digital (hybrid) sets use the TD1316AF hybrid (main) tuner **and** an empty (dummy)

tuner box (the UV1300T/1) as splitter. See figure “Block diagram non-dual window front-end (hybrid sets)” for details.

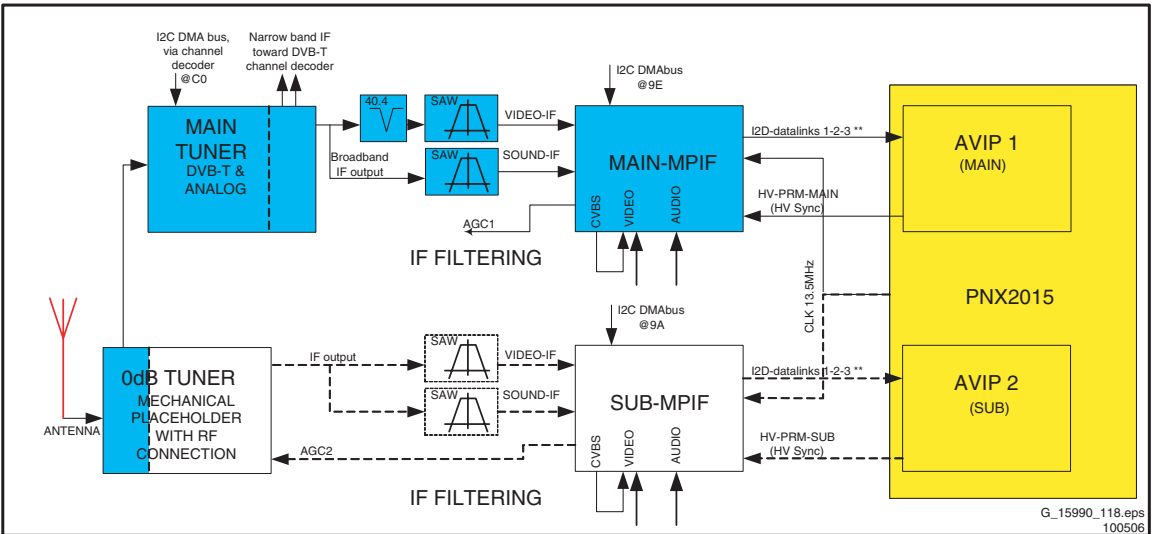


Figure 9-7 Block diagram non-dual window front-end (hybrid sets)

9.3.3 Non-dual window analogue applications

The 32PF9531/10 analogue set uses the UV1318ST analogue tuner. See figure “Block diagram non-dual window front-end (analogue sets)” for details.

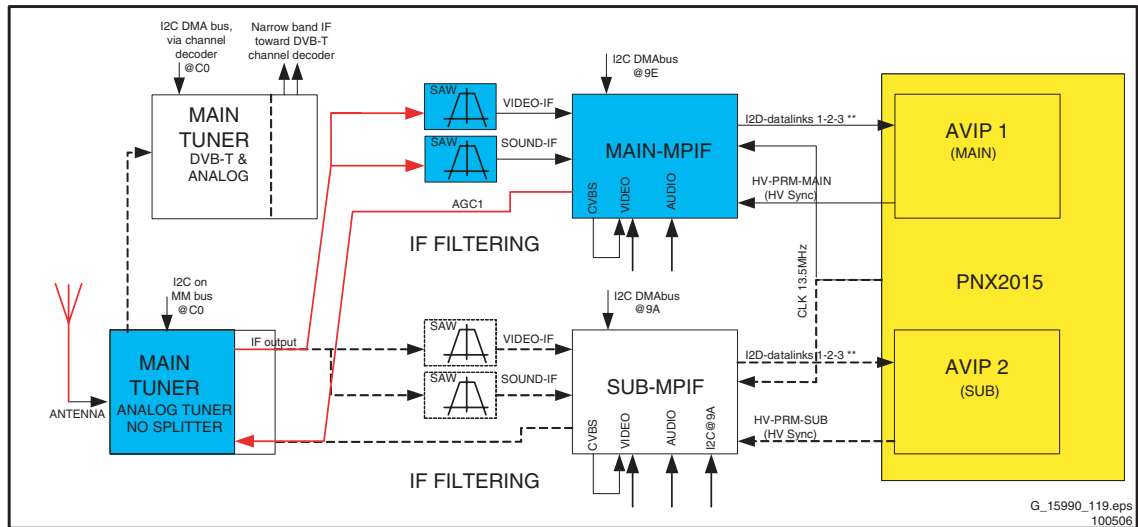


Figure 9-8 Block diagram non-dual window front-end (analogue sets)

9.4 DC/DC Converters (SSB)

9.4.1 Introduction

The LCD Supply is the main power supply for this chassis. This Power Supply delivers the following supply voltages to the chassis:

- +12VS.
- +8V6.
- +5V2.
- +5V.

For a (more) detailed description of the on-board DC/DC converters refer to the BL2.x U Service Manual.

9.5 Inputs

For a (more) detailed description of the Inputs refer to the JL2.1E AA Service Manual.

9.6 Common Interface (CI)

For a (more) detailed description of the Common Interface refer to the BJ3.0E LA Service Manual.

9.7 MPIF (PNX 3000)

For a (more) detailed description of the SPIDER refer to the BL2.1x U Service Manual.

9.8 PNX2015

The functional blocks of the PNX2015 (item 7J00) are:

- Audio Video Input Processor (AVIP).
- 3D Comb Filter (COLUMBUS).
- High Definition MPEG Decoder (HD Subsystem).
- LVDS transmitter.
- Stand-by Processor for low-power control.

For a (more) detailed description of the PNX2015 refer to the JL2.1E AA Service Manual.

9.9 SPIDER (T6TE0TBG)

For a (more) detailed description of the Inputs refer to the JL2.1E AA Service Manual.

9.10 VIPER 2 (PNX 8550)

For a (more) detailed description of the VIPER 2 refer to the JL2.1E AA Service Manual.

9.11 Back-end

In this chassis an FPGA (or EPLD or MOP) is used for AmbiLight processing and for addressing the LCD display.

The flow of signals varies with the different set executions. In general:

- In sets with an 1080p (full-HD) display, the video signal, coming from the Viper, is fed to an FPGA (the “Cyclone II”) and then flows into the Pacific 3.
- In some other sets (non full-HD) display, the video signal coming from the Viper directly flows into the Pacific 3.

However, an FPGA (the “Spartan 3E”) is used to drive the AmbiLight units.

- In all other sets (non full-HD) display, no FPGA is used to drive the AmbiLight units and a microprocessor is used to drive the lamp units, as described in BJ3.0E LA manual.

In the next sections, the differences are further explained.

9.11.1 Display Control Full-HD sets

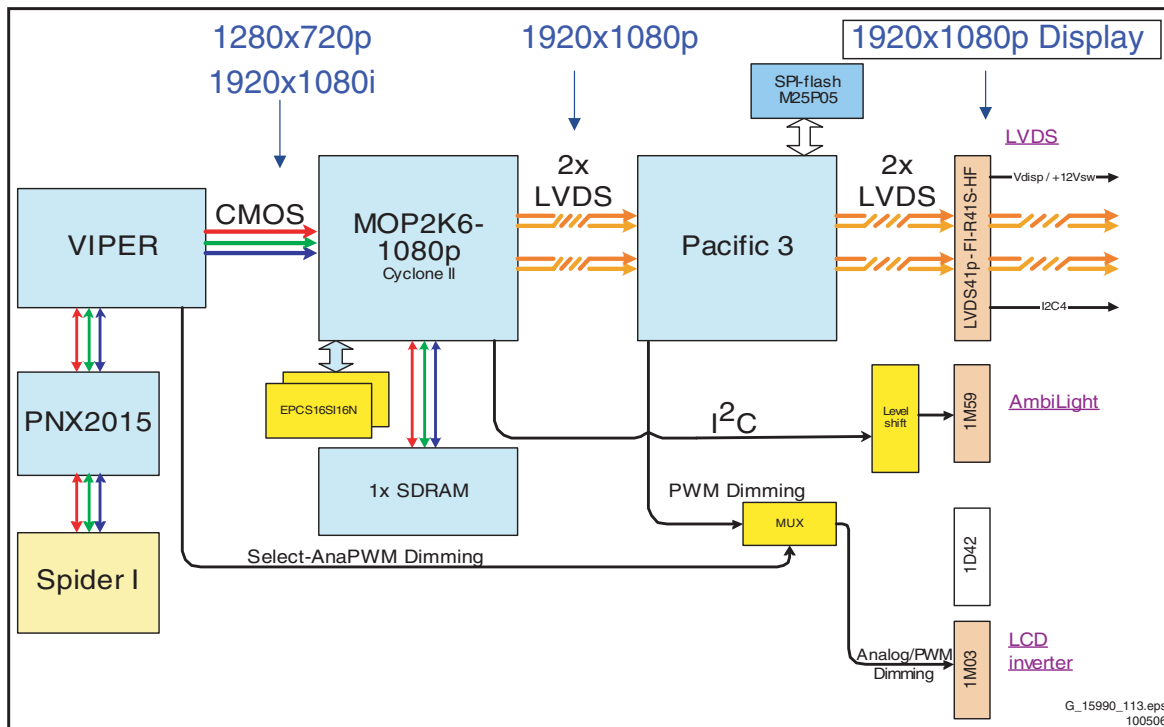


Figure 9-9 Block diagram display control full-HD sets with FPGA

In the full-HD sets, the video signal coming from the Viper is fed to the “Cyclone II” FPGA for further processing. The video signal coming from the MOP is fed to the Pacific 3 through an LVDS connection and then connected to the display. The MOP also drives the AmbiLight units through an I²C connection. The Pacific 3 also generates the pulse-width modulated signal needed for the “Dimming Backlight” feature, which ensures additional motion sharpness. As some displays require an analogue signal to switch the LCD, a multiplexer is added to transform the pulse-width modulated signal. An additional signal, coming from the Viper, makes the selection between analogue and pulse-width modulation, depending on which display is used.

The MOP performs the following tasks:

- Scaling of input signals to output in case not an 1080i signal is received.
- Deinterlacing of input signals to output in case an 1080i signal is received.
- Additional sharpness improvement.
- AmbiLight drive (3 or 4 regions).
- Pattern generator.

The MOP interfaces:

- CMOS video input, and dual LVDS output.
- I²C output for driving the AmbiLight unit.
- Additional configuration flash memory.
- Field memory (SDRAM) for video processing part.

9.11.2 Display Control Non Full-HD sets with FPGA

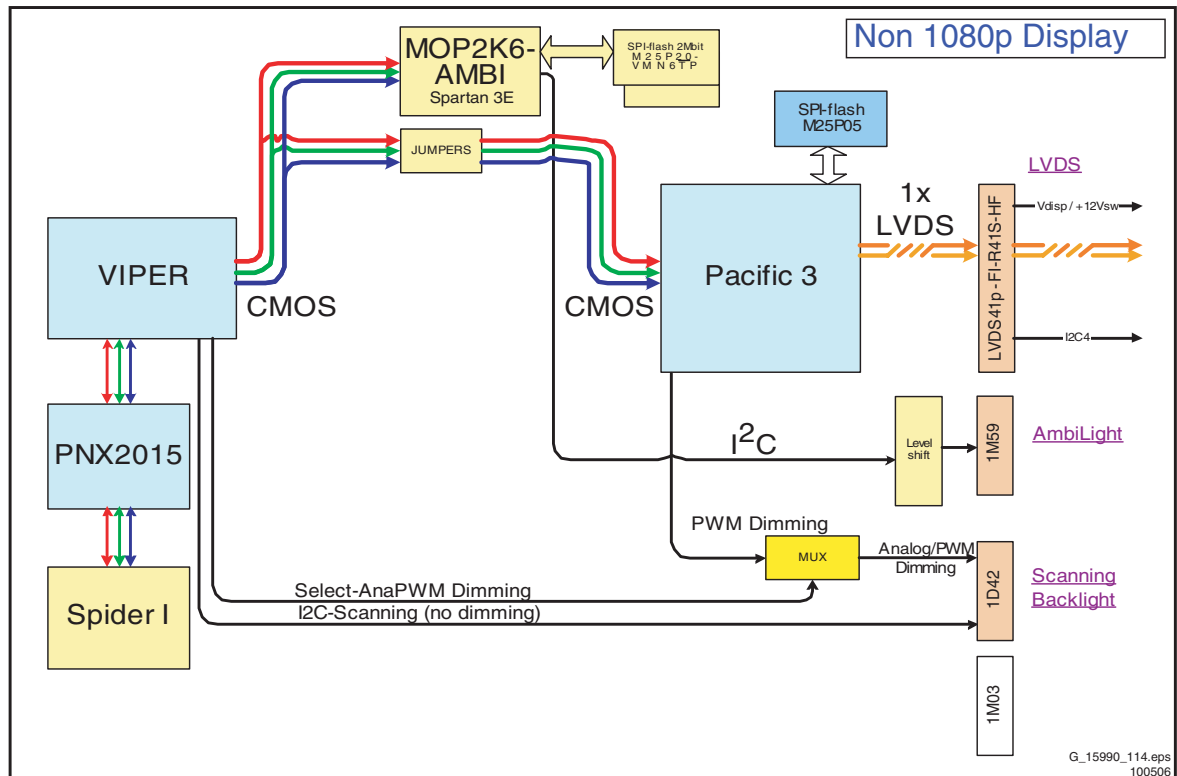


Figure 9-10 Block diagram display control non full-HD sets with FPGA

In non full-HD sets with an FPGA, the video signal coming from the Viper is directly fed to the Pacific 3 through an CMOS connection. The FPGA however is used for AmbiLight processing through an I²C connection. The signal for Dimming Backlight is coming from the Pacific 3 and can be analogue or pulse-width modulated, depending on which display is used. The signal for Scanning Backlight is an I²C signal coming from Viper. The MOP interfaces:

- CMOS video input.
- I²C output for driving the AmbiLight unit.
- Additional configuration flash memory.

9.11.3 Display Control Non Full-HD sets without FPGA

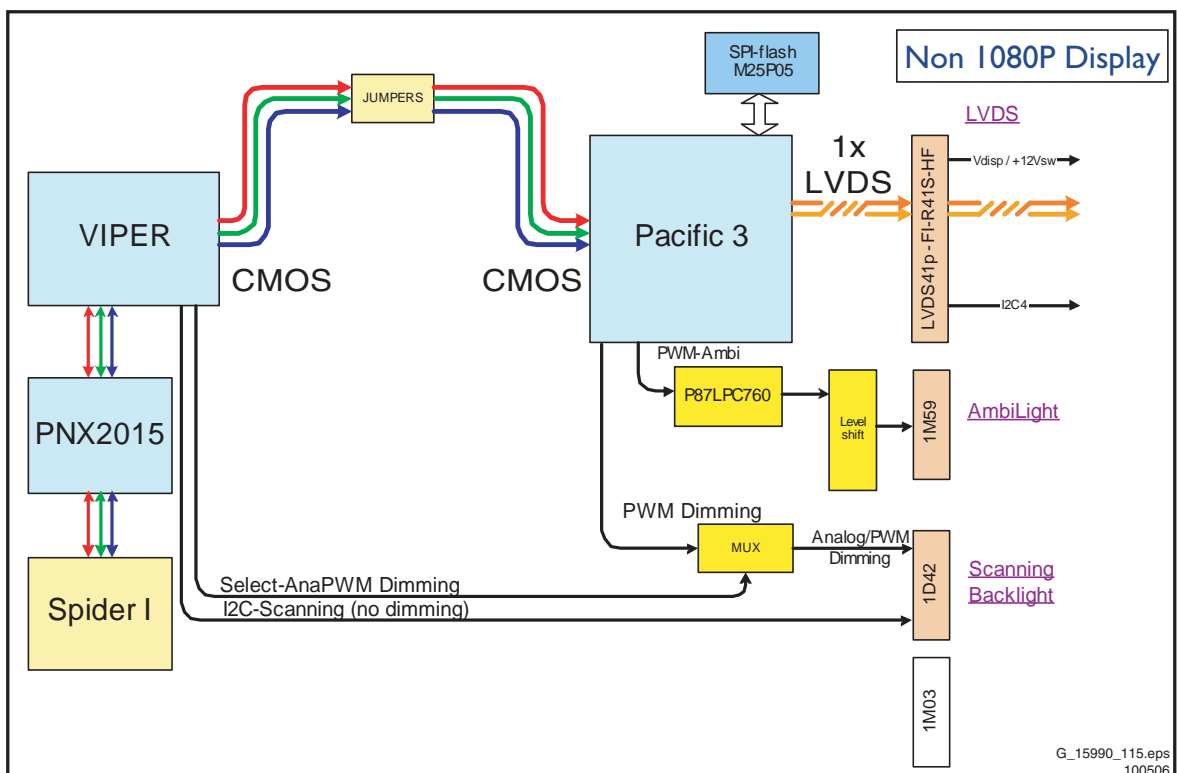


Figure 9-11 Block diagram display control non full-HD sets without FPGA

In non full-HD sets without an FPGA, the video signal coming from the Viper is again directly fed to the Pacific 3 through a CMOS connection. In this case the Pacific 3 drives the AmbiLight units and generates the pulse-width modulated signal needed for the "Dimming Backlight" feature. This configuration is also described in the BJ3.0x LA service manuals.

The Pacific performs the following tasks:

- Colour processing.
- Additional sharpness improvement.
- Backlight dimming.
- AmbiLight drive (2 regions).
- Display switch ON and OFF.
- Pattern generator.

The Pacific interfaces:

- CMOS video input, and LVDS video output.
- Backlight dimming is implemented through pulse-width modulated signal.
- AmbiLight driving is also implemented through pulse-width modulated signal.
- Additional configuration flash memory.

9.12 Ambient Light

For a (more) detailed description of the Inputs refer to the BP2.xU Service Manual.

9.13 Abbreviation List

0/6/12	SCART switch control signal on A/V board. 0 = loop through (AUX to TV), 6 = play 16:9 format, 12 = play 4:3 format	DFU	Directions For Use: owner's manual
2DNR	Spatial (2D) Noise Reduction	DMR	Digital Media Reader: card reader
3DNR	Temporal (3D) Noise Reduction	DNR	Digital Noise Reduction: noise reduction feature of the set
AARA	Automatic Aspect Ratio Adaptation: algorithm that adapts aspect ratio to remove horizontal black bars; keeps the original aspect ratio	DRAM	Dynamic RAM
ACI	Automatic Channel Installation: algorithm that installs TV channels directly from a cable network by means of a predefined TXT page	DRM	Digital Rights Management
ADC	Analogue to Digital Converter	DSP	Digital Signal Processing
AFC	Automatic Frequency Control: control signal used to tune to the correct frequency	DST	Dealer Service Tool: special remote control designed for service technicians
AGC	Automatic Gain Control: algorithm that controls the video input of the feature box	DTCP	Digital Transmission Content Protection; A protocol for protecting digital audio/video content that is traversing a high speed serial bus, such as IEEE-1394
AM	Amplitude Modulation	DVD	Digital Versatile Disc
ANR	Automatic Noise Reduction: one of the algorithms of Auto TV	DVI(-d)	Digital Visual Interface (d= digital only)
AP	Asia Pacific	E-DDC	Enhanced Display Data Channel (VESA standard for communication channel and display). Using E-DDC, the video source can read the EDID information from the display.
AR	Aspect Ratio: 4 by 3 or 16 by 9	EDID	Extended Display Identification Data (VESA standard)
ASF	Auto Screen Fit: algorithm that adapts aspect ratio to remove horizontal black bars without discarding video information	EEPROM	Electrically Erasable and Programmable Read Only Memory
ATSC	Advanced Television Systems Committee, the digital TV standard in the USA	EMI	Electro Magnetic Interference
ATV	See Auto TV	EPLD	Erasable Programmable Logic Device
Auto TV	A hardware and software control system that measures picture content, and adapts image parameters in a dynamic way	EU	Europe
AV	External Audio Video	EXT	EXTERNAL (source), entering the set by SCART or by cinches (jacks)
AVIP	Audio Video Input Processor	FBL	Fast BLanking: DC signal accompanying RGB signals
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz	FDS	Full Dual Screen (same as FDW)
BLR	Board-Level Repair	FDW	Full Dual Window (same as FDS)
BTSC	Broadcast Television Standard Committee. Multiplex FM stereo sound system, originating from the USA and used e.g. in LATAM and AP-NTSC countries	FLASH	FLASH memory
B-TXT	Blue TeleteXT	FM	Field Memory or Frequency Modulation
C	Centre channel (audio)	FPGA	Field-Programmable Gate Array
CEC	Consumer Electronics Control bus: remote control bus on HDMI connections	FTV	Flat TeleVision
CL	Constant Level: audio output to connect with an external amplifier	Gb/s	Giga bits per second
CLR	Component Level Repair	G-TXT	Green TeleteXT
COLUMBUS	COLOUR LUMinance Baseband Universal Sub-system	H	H_sync to the module
ComPair	Computer aided rePair	HD	High Definition
CP	Connected Planet / Copy Protection	HDD	Hard Disk Drive
CSM	Customer Service Mode	HDCP	High-bandwidth Digital Content Protection: A "key" encoded into the HDMI/DVI signal that prevents video data piracy. If a source is HDCP coded and connected via HDMI/DVI without the proper HDCP decoding, the picture is put into a "snow vision" mode or changed to a low resolution. For normal content distribution the source and the display device must be enabled for HDCP "software key" decoding.
CTI	Colour Transient Improvement: manipulates steepness of chroma transients	HDMI	High Definition Multimedia Interface
CVBS	Composite Video Blanking and Synchronization	HP	HeadPhone
DAC	Digital to Analogue Converter	I	Monochrome TV system. Sound carrier distance is 6.0 MHz
DBE	Dynamic Bass Enhancement: extra low frequency amplification	I ² C	Inter IC bus
DDC	See "E-DDC"	I ² D	Inter IC Data bus
D/K	Monochrome TV system. Sound carrier distance is 6.5 MHz	I ² S	Inter IC Sound bus
		IF	Intermediate Frequency
		Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in "pairs", causing line flicker.
		IR	Infra Red
		IRQ	Interrupt Request
		ITU-656	The ITU Radio communication Sector (ITU-R) is a standards body subcommittee of the International

	Telecommunication Union relating to radio communication. ITU-656 (a.k.a. SDI), is a digitized video format used for broadcast grade video. Uncompressed digital component or digital composite signals can be used. The SDI signal is self-synchronizing, uses 8 bit or 10 bit data words, and has a maximum data rate of 270 Mbit/s, with a minimum bandwidth of 135 MHz.	PFC	Power Factor Corrector (or Pre-conditioner)
ITV	Institutional TeleVision; TV sets for hotels, hospitals etc.	PIP	Picture In Picture
JOP	Jaguar Output Processor	PLL	Phase Locked Loop. Used for e.g. FST tuning systems. The customer can give directly the desired frequency
LS	Last Status; The settings last chosen by the customer and read and stored in RAM or in the NVM. They are called at start-up of the set to configure it according to the customer's preferences	POR	Power On Reset, signal to reset the uP
LATAM	Latin America	Progressive Scan	Scan mode where all scan lines are displayed in one frame at the same time, creating a double vertical resolution.
LCD	Liquid Crystal Display	PTC	Positive Temperature Coefficient, non-linear resistor
LED	Light Emitting Diode	PWB	Printed Wiring Board (same as "PCB")
L/L'	Monochrome TV system. Sound carrier distance is 6.5 MHz. L' is Band I, L is all bands except for Band I	PWM	Pulse Width Modulation
LORE	LOcal REgression approximation noise reduction	QTNR	Quality Temporal Noise Reduction
LPL	LG.Philips LCD (supplier)	QVCP	Quality Video Composition Processor
LS	Loudspeaker	RAM	Random Access Memory
LVDS	Low Voltage Differential Signalling	RGB	Red, Green, and Blue. The primary colour signals for TV. By mixing levels of R, G, and B, all colours (Y/C) are reproduced.
Mbps	Mega bits per second	RC	Remote Control
M/N	Monochrome TV system. Sound carrier distance is 4.5 MHz	RC5 / RC6	Signal protocol from the remote control receiver
MIPS	Microprocessor without Interlocked Pipeline-Stages; A RISC-based microprocessor	RESET	RESET signal
MOP	Matrix Output Processor	ROM	Read Only Memory
MOSFET	Metal Oxide Silicon Field Effect Transistor, switching device	R-TXT	Red TeleteXT
MPEG	Motion Pictures Experts Group	SAM	Service Alignment Mode
MPIF	Multi Platform InterFace	S/C	Short Circuit
MUTE	MUTE Line	SCART	Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televisieurs
NC	Not Connected	SCL	Serial Clock I ² C
NICAM	Near Instantaneous Compounded Audio Multiplexing. This is a digital sound system, mainly used in Europe.	SCL-F	CLock Signal on Fast I ² C bus
NTC	Negative Temperature Coefficient, non-linear resistor	SD	Standard Definition
NTSC	National Television Standard Committee. Colour system mainly used in North America and Japan. Colour carrier NTSC M/N= 3.579545 MHz, NTSC 4.43= 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)	SDA	Serial Data I ² C
NVM	Non-Volatile Memory: IC containing TV related data such as alignments	SDA-F	DAta Signal on Fast I ² C bus
O/C	Open Circuit	SDI	Serial Digital Interface, see "ITU-656"
OSD	On Screen Display	SDRAM	Synchronous DRAM
OTC	On screen display Teletext and Control; also called Artistic (SAA5800)	SECAM	SEquence Couleur Avec Memoire. Colour system mainly used in France and East Europe. Colour carriers= 4.406250 MHz and 4.250000 MHz
P50	Project 50: communication protocol between TV and peripherals	SIF	Sound Intermediate Frequency
PAL	Phase Alternating Line. Colour system mainly used in West Europe (colour carrier= 4.433619 MHz) and South America (colour carrier PAL M= 3.575612 MHz and PAL N= 3.582056 MHz)	SMPS	Switched Mode Power Supply
PCB	Printed Circuit Board (same as "PWB")	SOG	Sync On Green
PCM	Pulse Code Modulation	SOPS	Self Oscillating Power Supply
PDP	Plasma Display Panel	S/PDIF	Sony Philips Digital InterFace
		SRAM	Static RAM
		SSB	Small Signal Board
		STBY	STand-BY
		SVGA	800x600 (4:3)
		SVHS	Super Video Home System
		SW	Software
		SWAN	Spatial temporal Weighted Averaging Noise reduction
		SXGA	1280x1024
		TFT	Thin Film Transistor
		THD	Total Harmonic Distortion
		TMD5	Transmission Minimized Differential Signalling
		TXT	TeleteXT
		TXT-DW	Dual Window with TeleteXT
		uP	Microprocessor
		UXGA	1600x1200 (4:3)
		V	V-sync to the module
		VCR	Video Cassette Recorder
		VESA	Video Electronics Standards Association
		VGA	640x480 (4:3)
		VL	Variable Level out: processed audio output toward external amplifier
		VSB	Vestigial Side Band; modulation method

WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
WXGA	1280x768 (15:9)
XTAL	Quartz crystal
XGA	1024x768 (4:3)
Y	Luminance signal
Y/C	Luminance (Y) and Chrominance (C) signal
YPbPr	Component video. Luminance and scaled colour difference signals (B-Y and R-Y)
YUV	Component video

9.14 IC Data Sheets

electrical diagrams (with the exception of "memory" and "logic" ICs).

This section shows the internal block diagrams and pin configurations of ICs that are drawn as "black boxes" in the

9.14.1 Diagram A1, AVS1ACP08 (IC 7805)

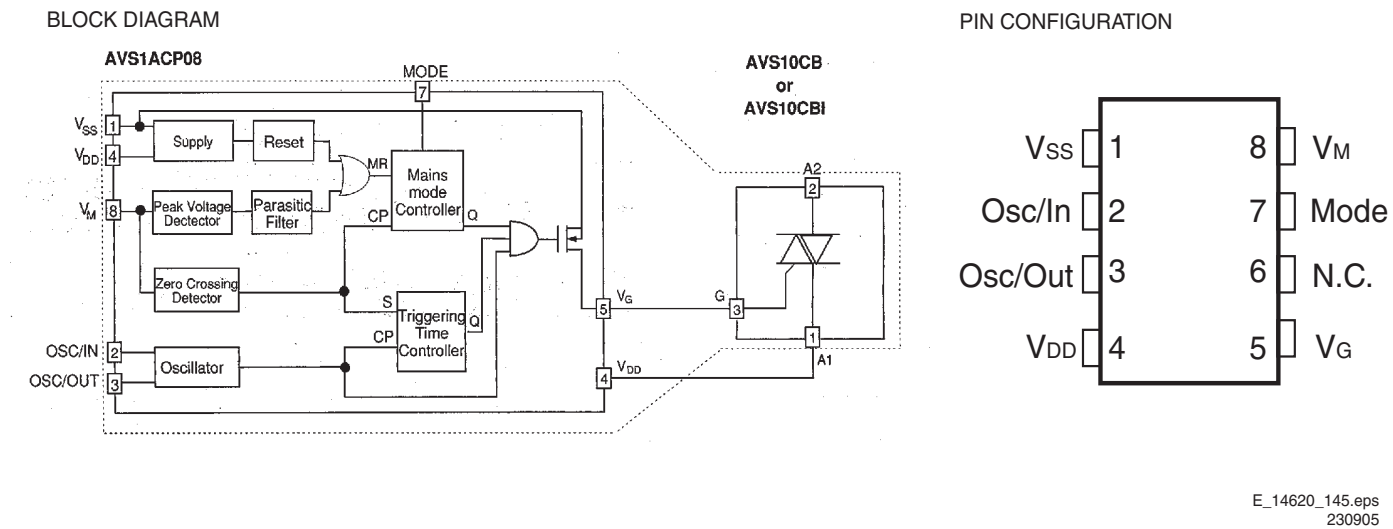


Figure 9-12 Internal block diagram and pin configuration

9.14.2 Diagram A2, MC34067P (IC 7001)

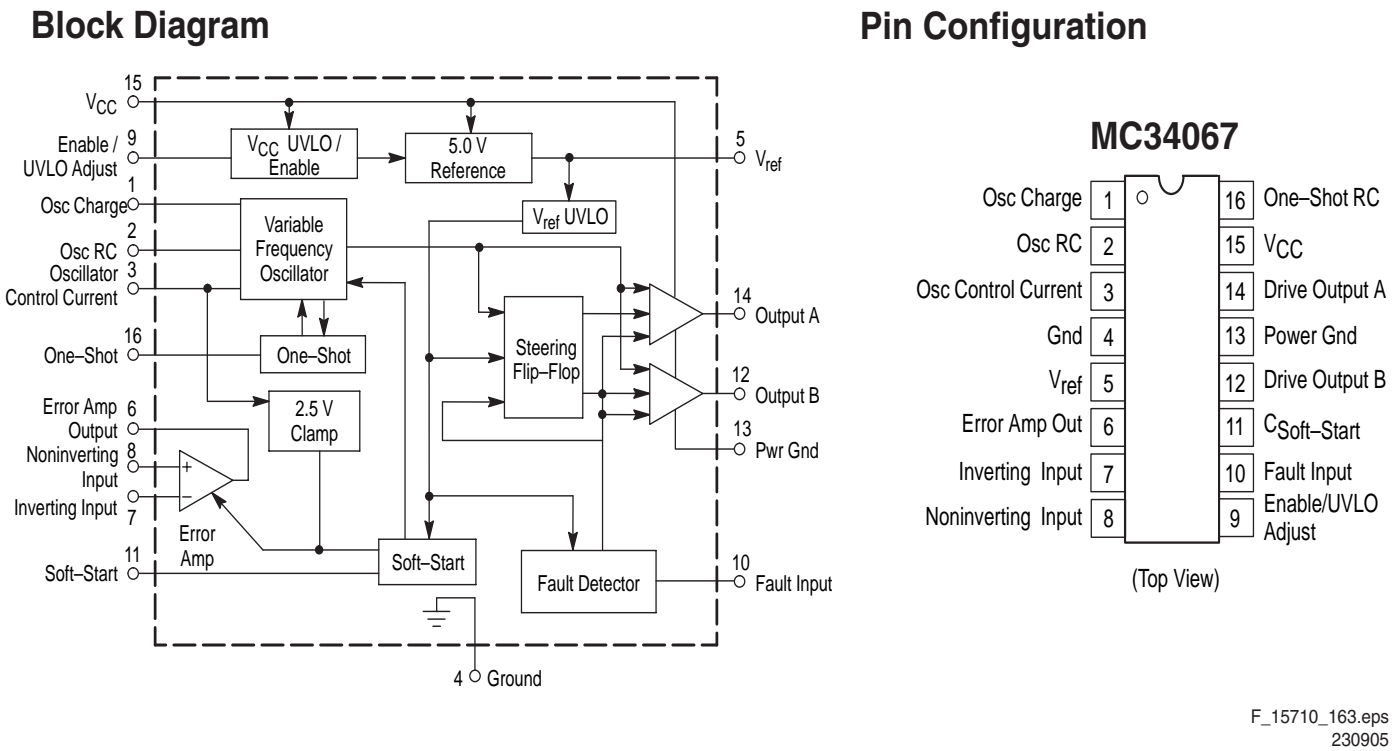


Figure 9-13 Internal block diagram and pin configuration

9.14.3 Diagram A3, TEA1506AT (IC7P27)

Block diagram

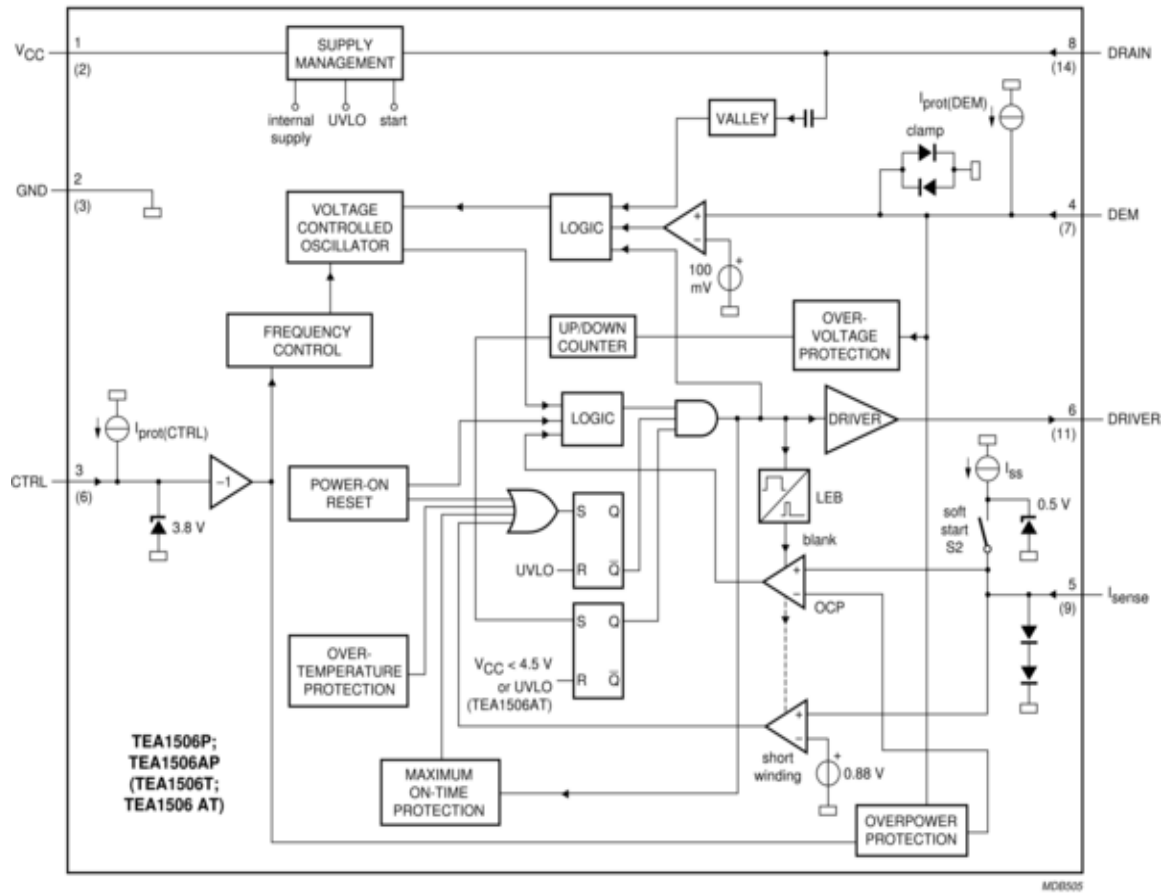
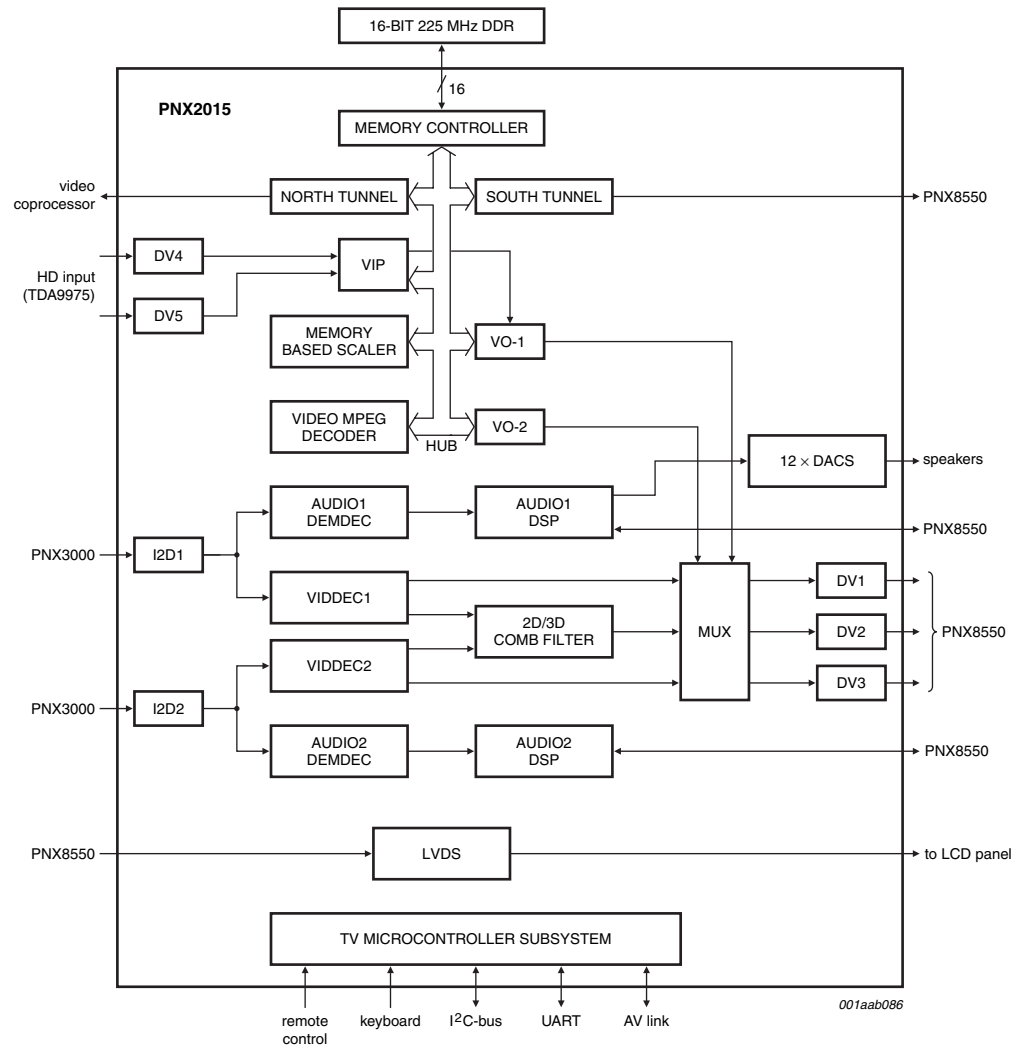


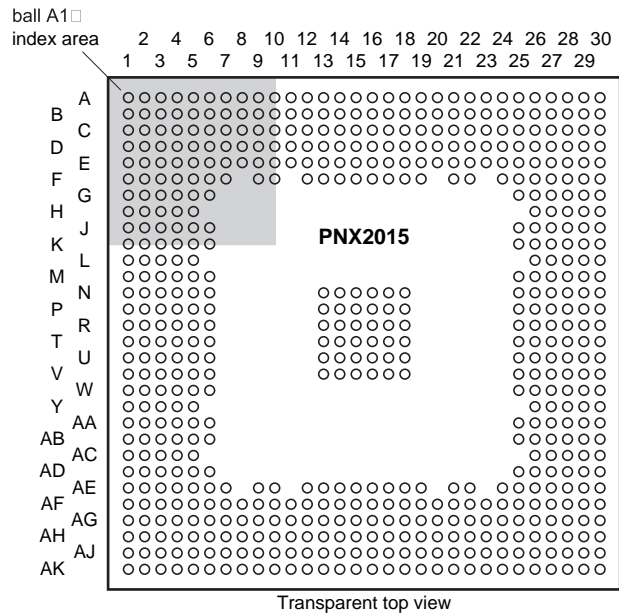
Figure 9-14 Internal block diagram and pin configuration

9.14.5 Diagram B4x, PNX2015E (IC 7J00)

Block Diagram



Pin Configuration



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240505

Figure 9-16 Internal block diagram and pin configuration

9.14.6 Diagram B6x, T6TE0TBG SPIDER (IC 7R00)

Pin Configuration

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	AA	AB	AC
23	A23 RESET SMTTF	B23 TST1 TLCHTHF	C23 TST2 TLCHTHF	D23 TCK SMTTF	E23 SDA WB0ICODIF	F23 TRST TLCHTHF	G23 TDO BT4RIF	H23 INT BT4RIF	J23 DDR_A3 Z7BSSTHC1	K23 DDR_A2 Z7BSSTHC1	L23 DDR_A1 Z7BSSTHC1	M23 DDR_A0 Z7BSSTHC1	N23 DDR_A11 Z7BSSTHC1	P23 DDR_A8 Z7BSSTHC1	R23 DDR_BA0 Z7BSSTHC1	T23 DDR_RASN Z7BSSTHC1	U23 DDR_CASN Z7BSSTHC1	V23 DDR_OKE Z7BSSTHC1	W23 DDR_CK1 Z7BSSTFC1	Y23 DDR_LDQS Z7BSSTHC1	AA23 DDR_CKN Z7BSSTHC1		AC23 DDR_DQ1 Z7BSSTHC1
22		B22 TST_OUT9 BT4RIF	C22 TST0 TLCHTHF	D22 TST3 TLCHTHF	E22 SCL WB0ICODIF	F22 TMS TLCHTHF	G22 TDI TLCHTHF			K22 DDR_A4 Z7BSSTHC1	L22 DDR_A5 Z7BSSTHC1	M22 DDR_A6 Z7BSSTHC1	N22 DDR_A7 Z7BSSTHC1	P22 DDR_A10 Z7BSSTHC1	R22 DDR_BA1 Z7BSSTHC1	T22 DDR_A9 Z7BSSTHC1		V22 DDR_WEN Z7BSSTHC1		Y22 DDR_LDQS Z7BSSTHC1	AA22 DDR_CK Z7BSSTHC1	AB22 DDR_DQ0 Z7BSSTHC1	AC22 DDR_DQ3 Z7BSSTHC1
21	A21 TST_OUT6 BT4RIF	B21 TST_OUT7 BT4RIF	C21 TST_OUT8 BT4RIF																			AB21 DDR_DQ2 Z7BSSTHC1	
20	A20 TST_OUT4 BT4RIF	B20 TST_OUT5 BT4RIF																V20 DDR_VREF3 Z7VRSSTC1				AB20 DDR_DQ4 Z7BSSTHC1	AC20 DDR_DQ5 Z7BSSTHC1
19	A19 TST_OUT2 BT4RIF	B19 TST_OUT3 BT4RIF																			AA19 DDR_VREF2 Z7VRSSTC1	AB19 DDR_DQ6 Z7BSSTHC1	
18	A18 TST_OUT0 BT4RIF	B18 TST_OUT1 BT4RIF																				AB18 DDR_DQ7 Z7BSSTHC1	AC18 DDR_DQ8 Z7BSSTHC1
17	A17 TST_IN8 TLCHTHF	B17 TST_IN9 TLCHTHF																				AB17 DDR_DQ9 Z7BSSTHC1	AC17 DDR_DQ10 Z7BSSTHC1
16	A16 TST_IN7 TLCHTHF																						
15	A15 TST_IN6 TLCHTHF	B15 TST_IN5 TLCHTHF																			AA15 DDR_VREF1 Z7VRSSTC1	AB15 DDR_DQ11 Z7BSSTHC1	AC15 DDR_DQ12 Z7BSSTHC1
14	A14 TST_IN4 TLCHTHF	B14 TST_IN3 TLCHTHF																				AB14 DDR_DQ13 Z7BSSTHC1	AC14 DDR_DQ14 Z7BSSTHC1
13	A13 TST_IN2 TLCHTHF	B13 TST_IN1 TLCHTHF																					AC13 DDR_DQ15 Z7BSSTHC1
12	A12 TST_IN0 TLCHTHF	B12 TUN_RX_DAT A10 Z7SSSTFC1																					
11		B11 TUN_RX_DAT A8 Z7SSSTFC1																				AB11 TST_IN10 TLCHTHF	AC11 TST_IN11 TLCHTHF
10	A10 TUN_RX_DAT A15 Z7SSSTFC1	B10 TUN_RX_BUS Y Z7BSSTHC1																				AB10 TST_IN12 TLCHTHF	AC10 TST_IN13 TLCHTHF
9	A9 TUN_RX_DAT A14 Z7BSSTFC1	B9 TUN_RX_DAT A13 Z7BSSTFC1	C9 TUN_RX_VRE F1 Z7VRSSTC1																			AB9 TST_IN14 TLCHTHF	AC9 TST_IN15 TLCHTHF
8		B8 TUN_RX_DAT A12 Z7BSSTFC1																				AB8 BISTEN TLCHTHF	AC8 DIODE_IN ZETMDL
7	A7 TUN_RX_CKA N Z7SSSTFC1	B7 TUN_RX_DAT A11 Z7SSSTFC1																				AB7 TST_CLK1 TLCHTHF	AC7 DIODE_OUT ZETMDR
6	A6 TUN_RX_CKA P Z7SSSTFC1	B6 TUN_RX_DAT A3 Z7SSSTFC1		D6 TUN_RX_VRE F2 Z7VRSSTC1																		AB6 TST_CLK1 TLCHTHF	
5	A5 TUN_RX_DAT A7 Z7BSSTFC1	B5 TUN_RX_DAT A6 Z7BSSTFC1																					AC5 TST_CLK2 TLCHTHF
4	A4 TUN_RX_DAT A5 Z7SSSTFC1																					AB4 SCLOUTP_PL L ZEBORV	AC4 SCLOUTN_PL L ZEBORV
3	A3 TUN_RX_DAT A4 Z7BSSTFC1	B3 TUN_RX_DAT A9 Z7BSSTFC1										M3 TUN_TX_VRE F1 Z7VRSSTC1									AA3 TST_IN16 TLCHTHF		
2	A2 TUN_RX_DAT A0 Z7BSSTFC1	B2 TUN_TX_DAT A1 Z7BSSTFC1	C2 TUN_TX_DAT A14 Z7BSSTHC1	D2 TUN_TX_DAT A8 Z7BSSTHC1		F2 TUN_TX_DAT A5 Z7BSSTHC1	G2 TUN_TX_CKA P Z7BSSTHC1		J2 TUN_TX_DAT A7 Z7BSSTHC1	K2 TUN_TX_DAT A0 Z7BSSTHC1			N2 TUN_TX_DAT A4 Z7BSSTHC1	P2 TST_PD TLCHTHF	R2 TST_OUT18 BT4RIF	T2 TST_OUT16 BT4RIF	U2 TST_OUT14 BT4RIF	V2 TST_OUT12 BT4RIF	W2 TST_OUT10 BT4RIF	Y2 CLK TLCHTHF	AA2 TST_IN19 TLCHTHF	AB2 TST_IN17 TLCHTHF	
1	A1 TUN_RX_DAT A2 Z7BSSTFC1	B1 TUN_TX_DAT A12 Z7BSSTHC1	C1 TUN_TX_DAT A15 Z7BSSTHC1	D1 TUN_TX_DAT A13 Z7BSSTHC1	E1 TUN_TX_DAT A10 Z7BSSTHC1	F1 TUN_TX_DAT A9 Z7BSSTHC1	G1 TUN_TX_DAT A11 Z7BSSTHC1	H1 TUN_TX_CKA N Z7BSSTHC1	J1 TUN_TX_DAT A3 Z7BSSTHC1	K1 TUN_TX_DAT A6 Z7BSSTHC1	L1 TUN_TX_DAT A1 Z7BSSTHC1	M1 TUN_TX_BUS Y Z7BSSTFC1	N1 TUN_TX_DAT A2 Z7BSSTHC1	P1 TST_SCAN_T UN TLCHTHF	R1 TST_OUT19 BT4RIF	T1 TST_OUT17 BT4RIF	U1 TST_OUT15 BT4RIF	V1 TST_OUT13 BT4RIF	W1 TST_OUT11 BT4RIF	Y1 TST_CLK3 TLCHTHF	AA1 LFM0NP_PL1 ZEBORV	AB1 LFM0NN_PL1 ZEBORV	AC1 TST_IN18 TLCHTHF

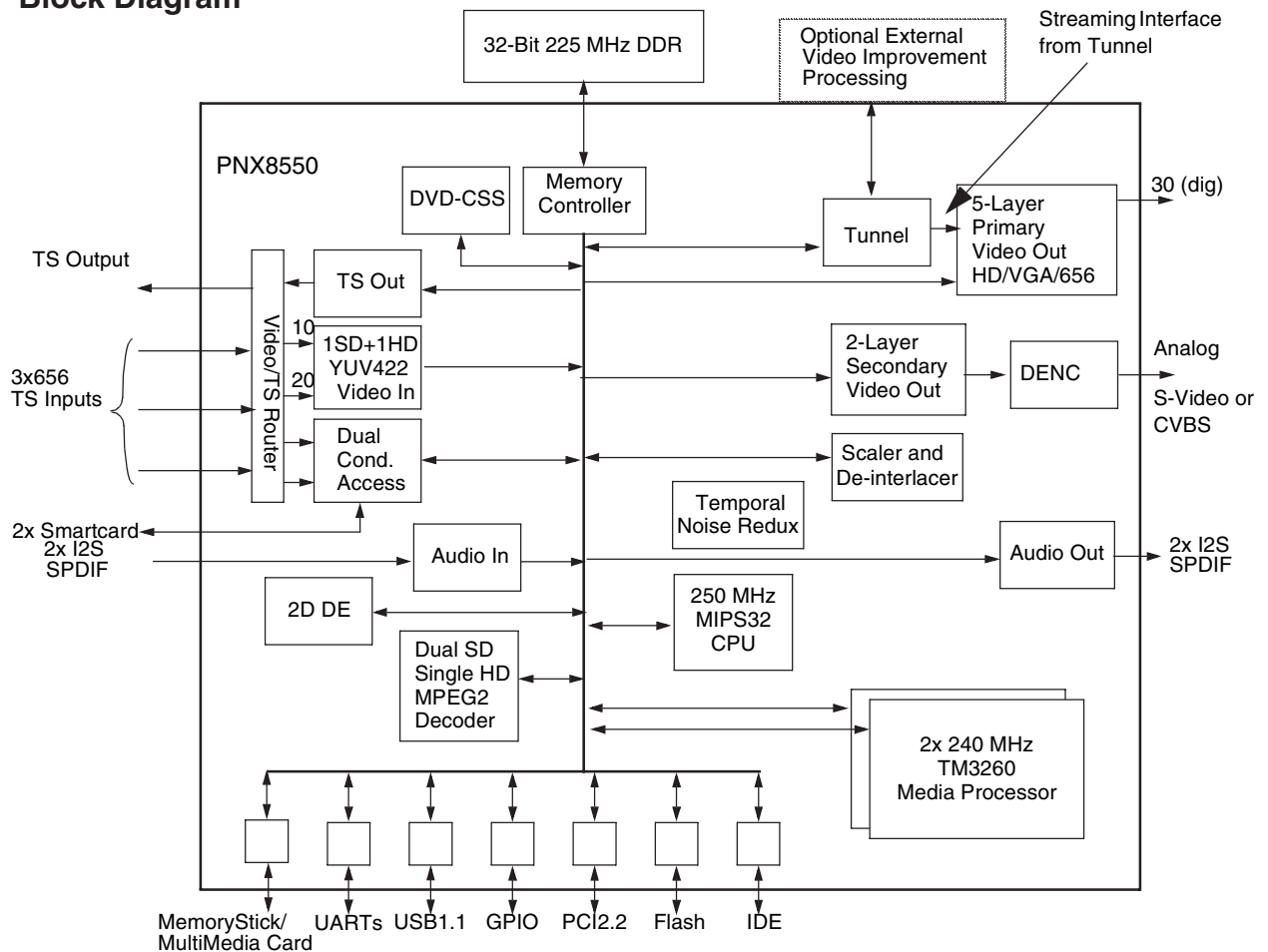
T6TE0TBG

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120506

Figure 9-17 Pin configuration

9.14.7 Diagram B7x, PNX8550EH (IC 7V00)

Block Diagram



Pin Configuration

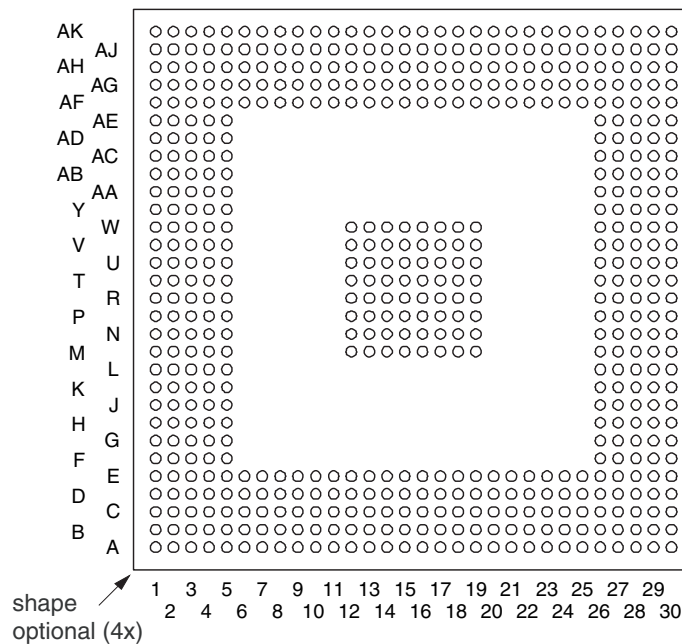
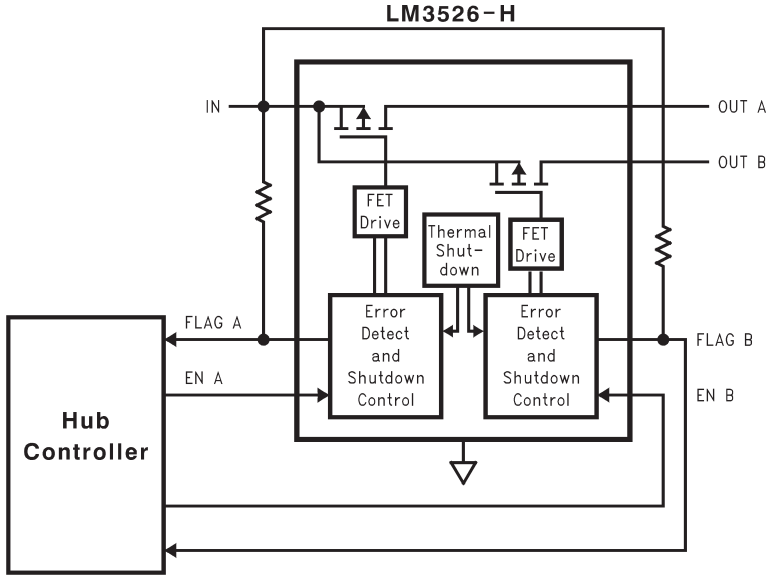
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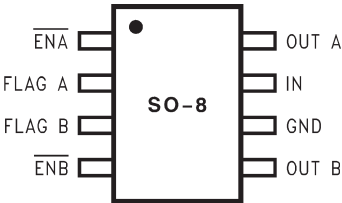
Figure 9-18 Internal block diagram and pin configuration

9.14.8 Diagram B7A, LM3526MX (IC 7Q01)

Block Diagram



Pin Configuration



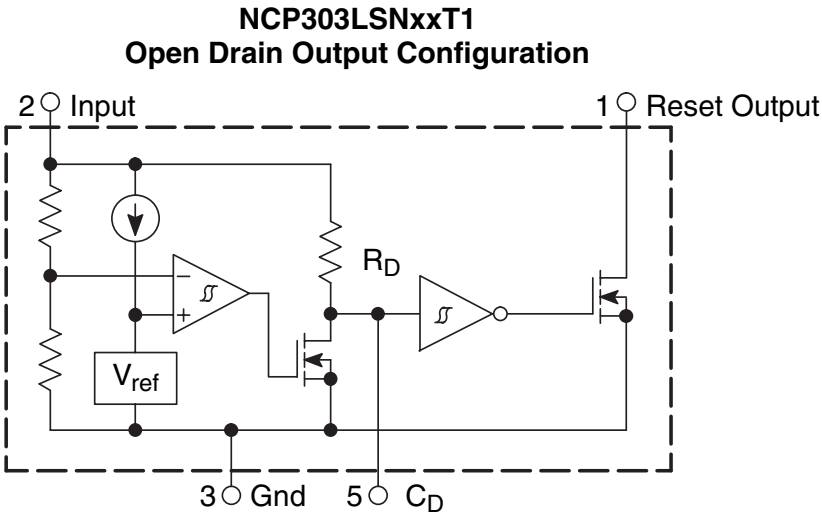
LM3526-L

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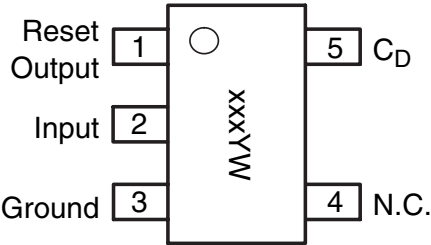
Figure 9-19 Internal block diagram and pin configuration

9.14.9 Diagram B8A, NCP303LSN (IC 7LB0 - 7LB4)

Block Diagram



Pin Configuration

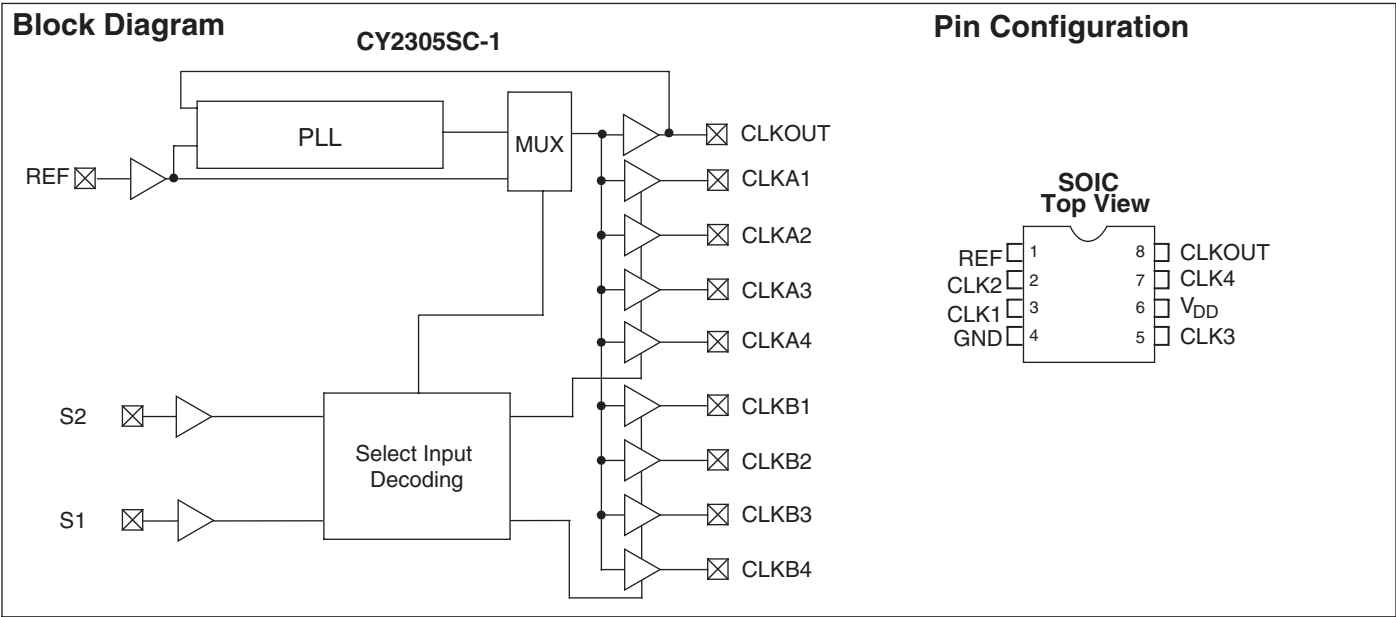


xxx = 302 or 303
Y = Year
W = Work Week
(Top View)

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230905

Figure 9-20 Internal block diagram and pin configuration

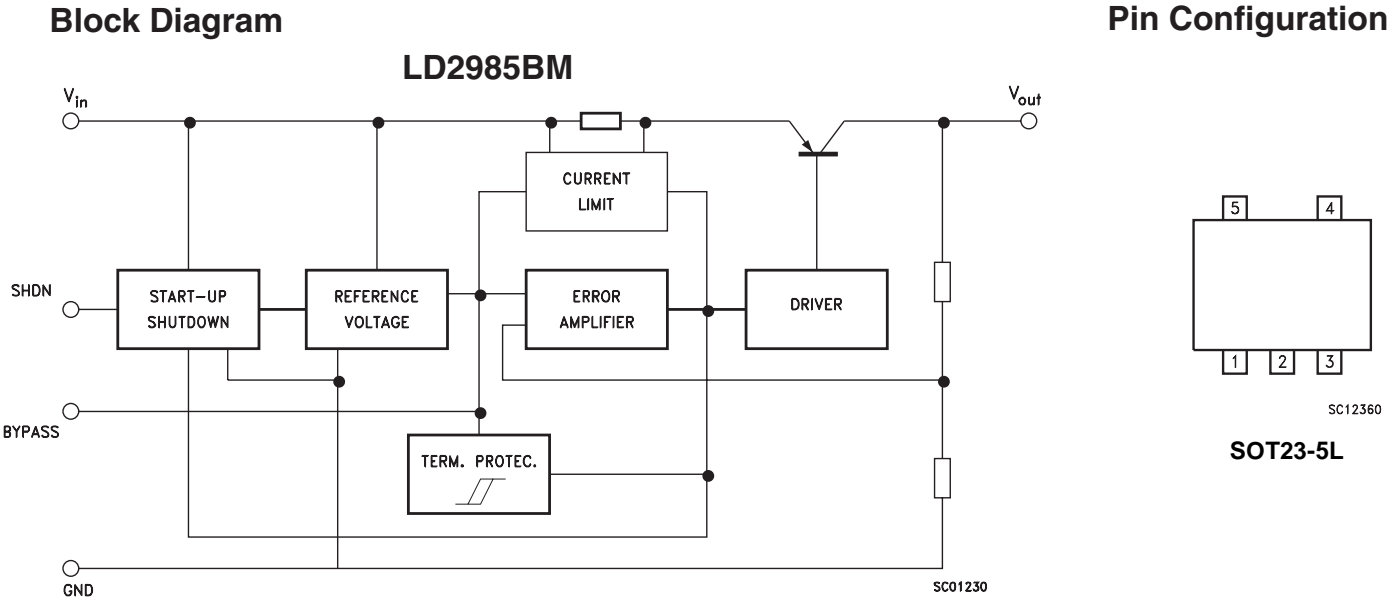
9.14.10 Diagram B8B, CY2305SC-1 (IC 7J08)



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241004

Figure 9-21 Internal block diagram and pin configuration

9.14.11 Diagram B9A, LD2985BM (IC 7G00)



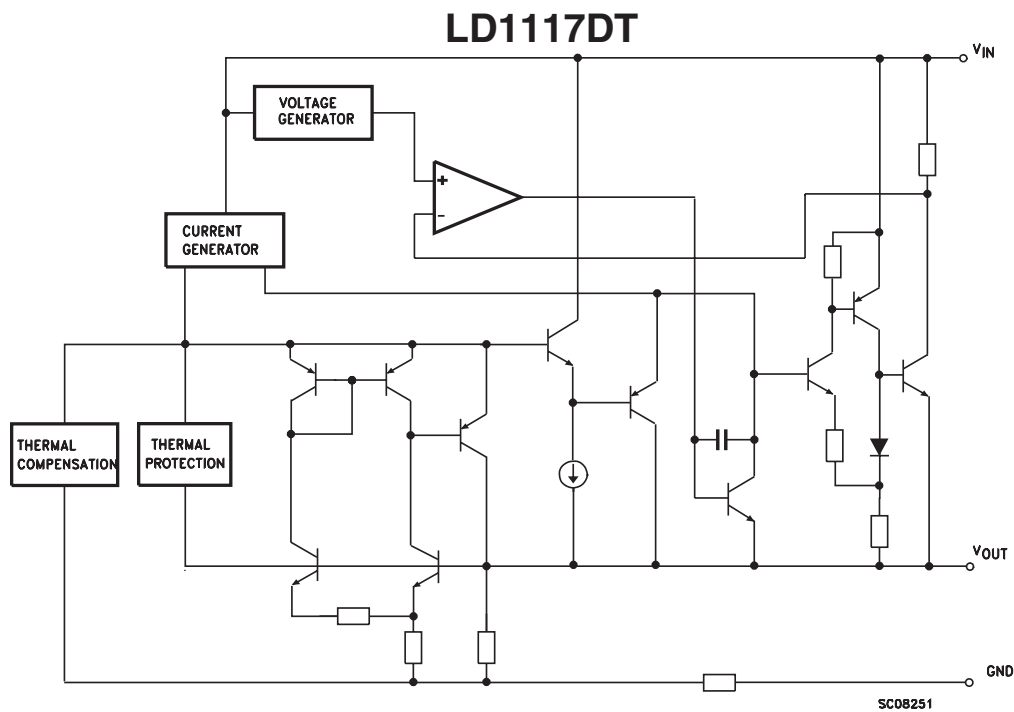
SC12360

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230905

Figure 9-22 Internal block diagram and pin configuration

9.14.12 Diagram B9A, LD1117DT (IC7G01)

Block Diagram



Pin Configuration

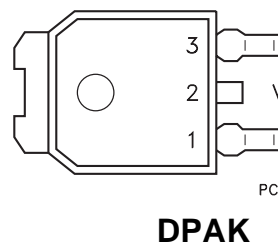
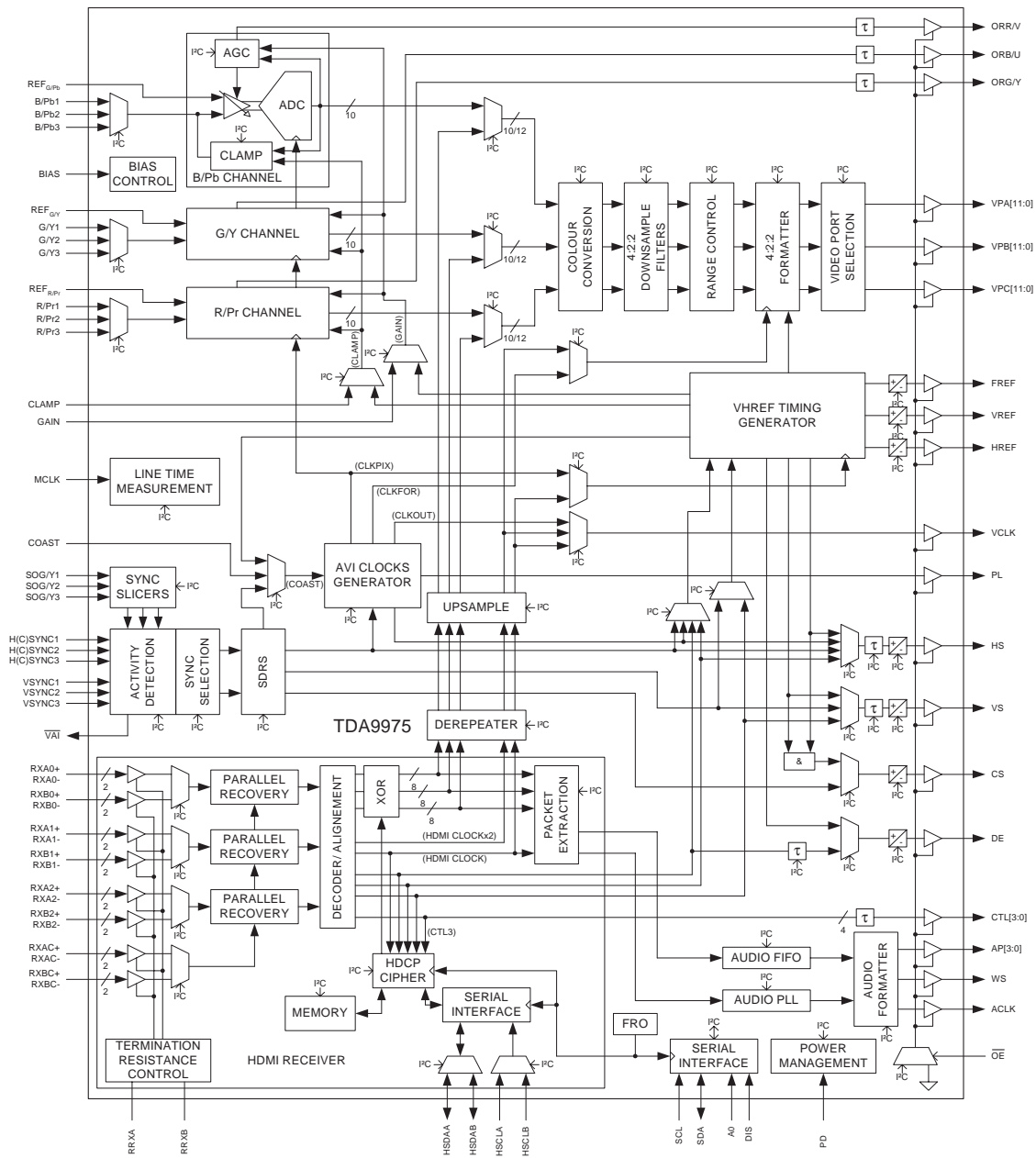


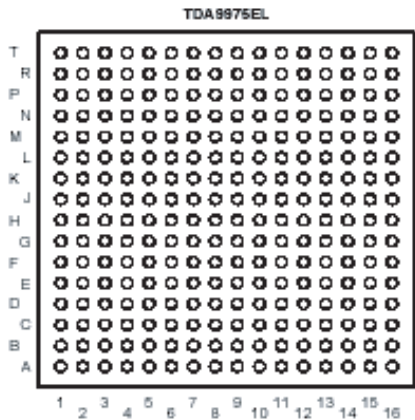
Figure 9-23 Internal block diagram and pin configuration

9.14.13 Diagram B11B & B11C, TDA9975EL (IC 7B11)

Block Diagram



Pin Configuration

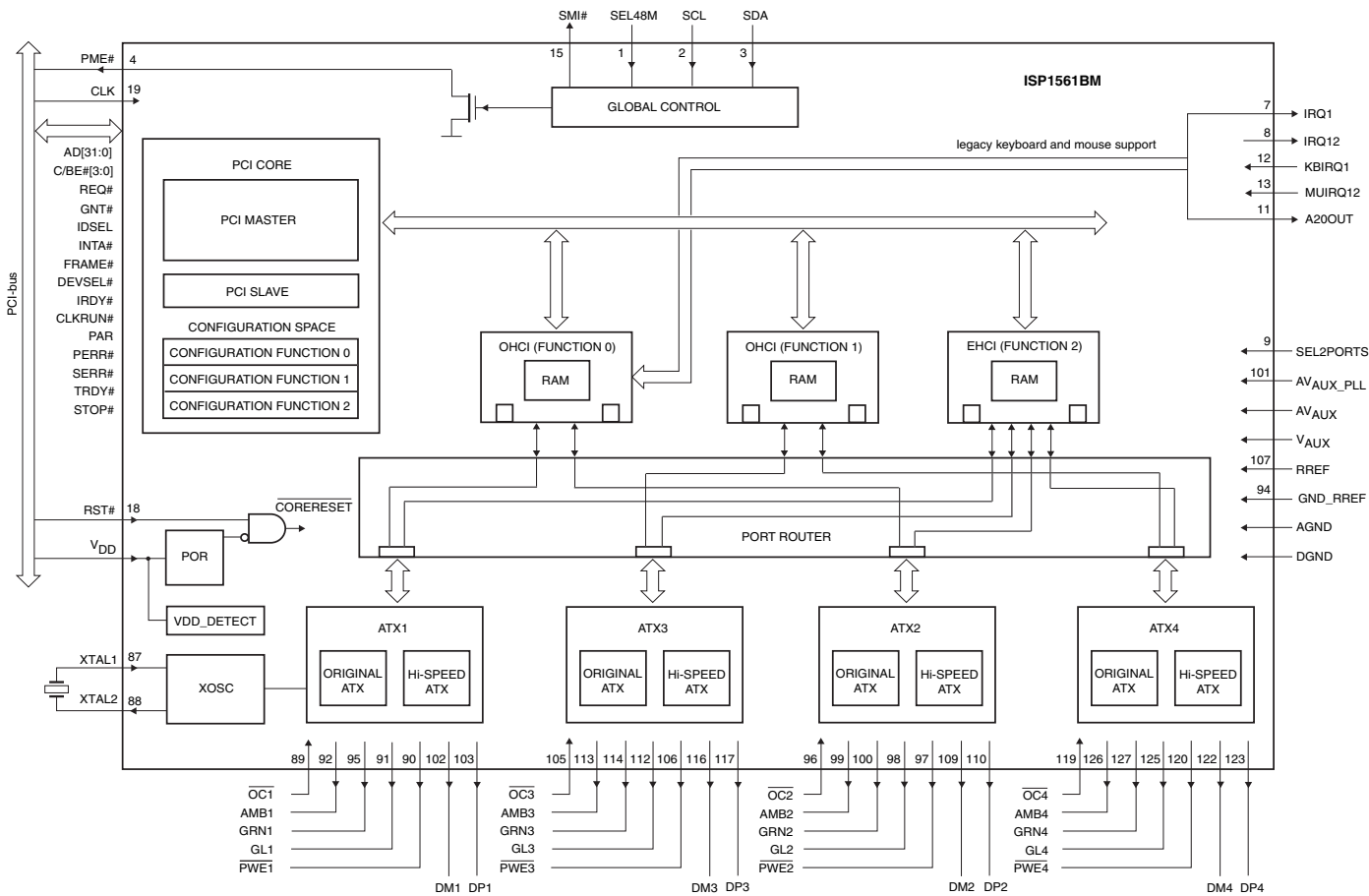


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240505

Figure 9-24 Internal block diagram and pin configuration

9.14.14 Diagram B13A, ISP1561BM (IC 7N00)

Block Diagram



Pin Configuration

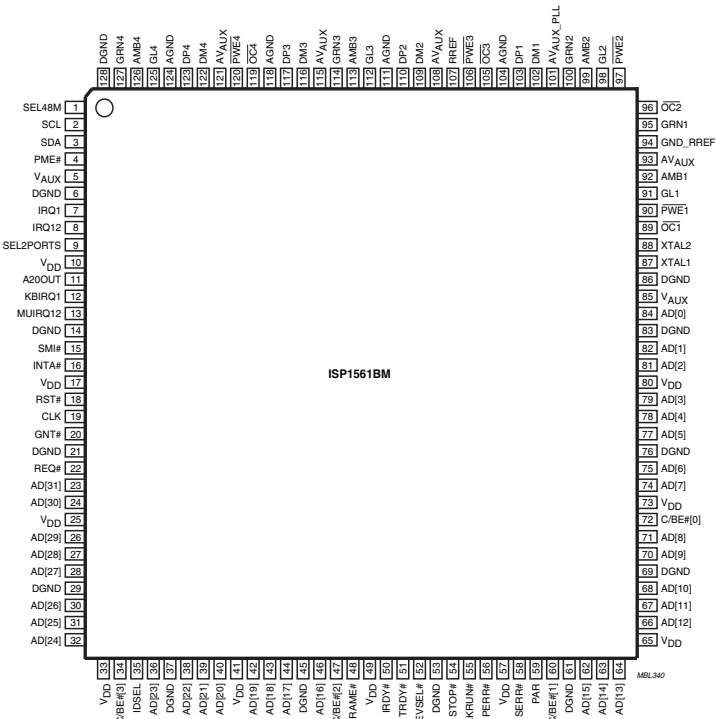
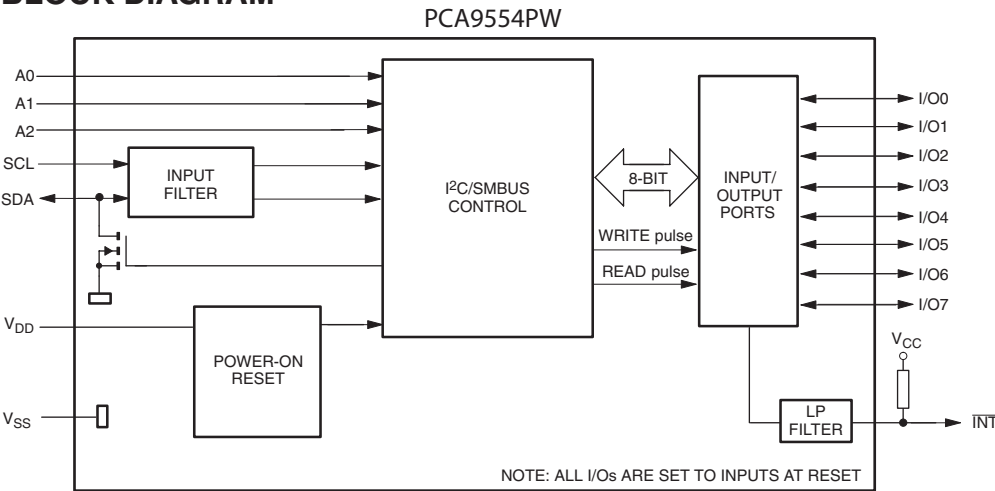


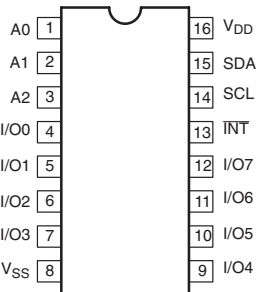
Figure 9-25 Internal block diagram and pin configuration

9.14.15 Diagram B14B, PCA9554PW (IC 7I55)

BLOCK DIAGRAM



PIN CONFIGURATION

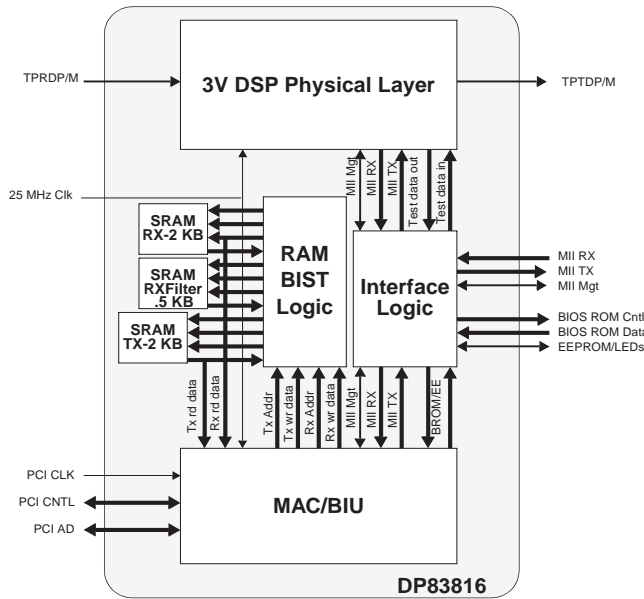


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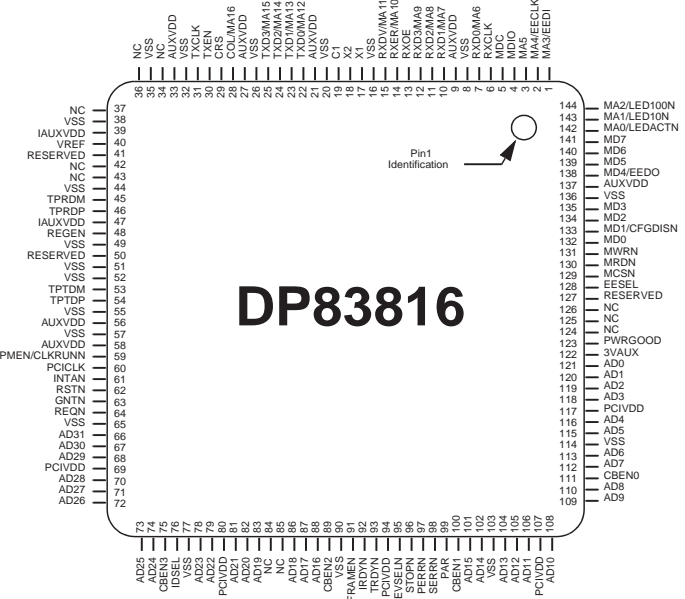
Figure 9-26 Internal block diagram and pin configuration

9.14.16 Diagram B15, DP83816AVNG (7000)

Block Diagram



Pin Configuration

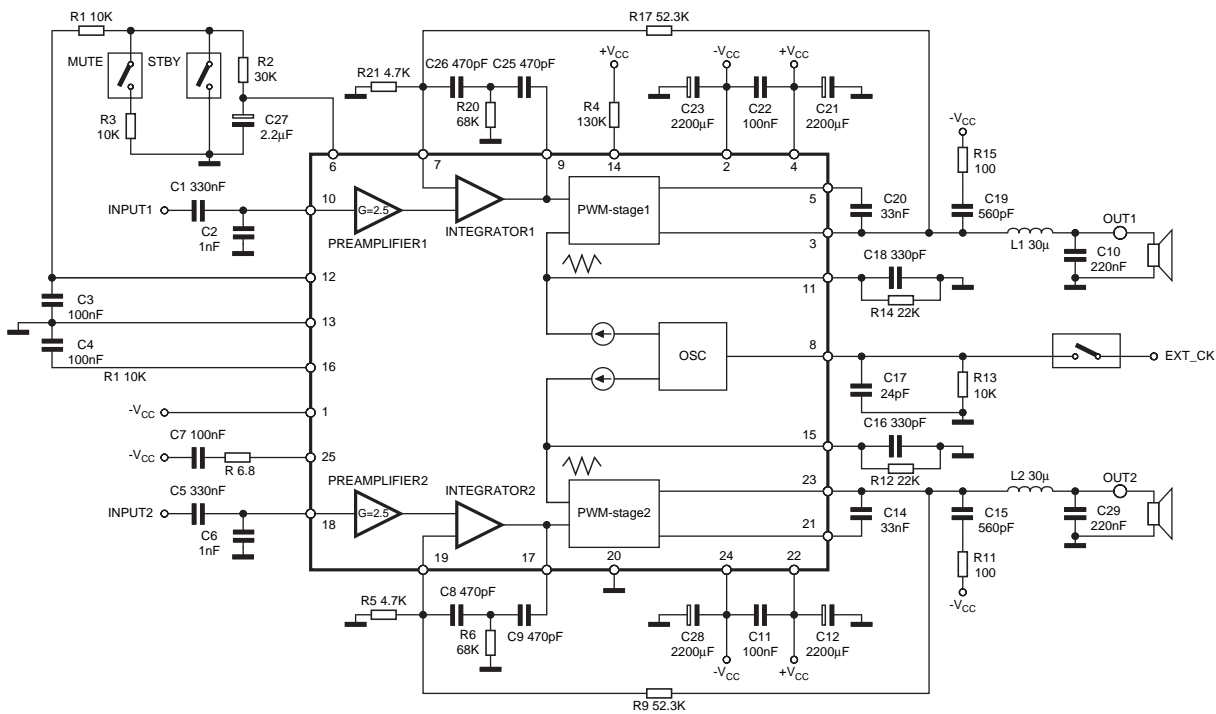


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230905

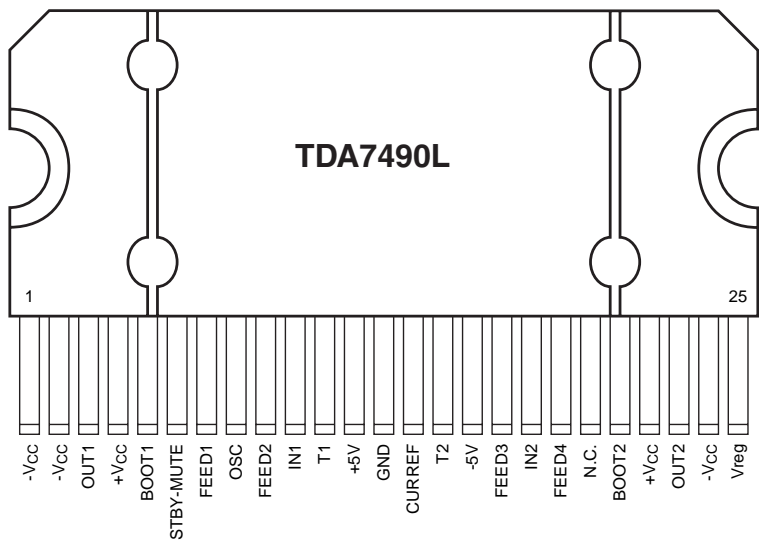
Figure 9-27 Internal block diagram and pin configuration

9.14.17 Diagram SA3, TDA7490LG (7700)

Block Diagram



Pin Configuration (Top View)

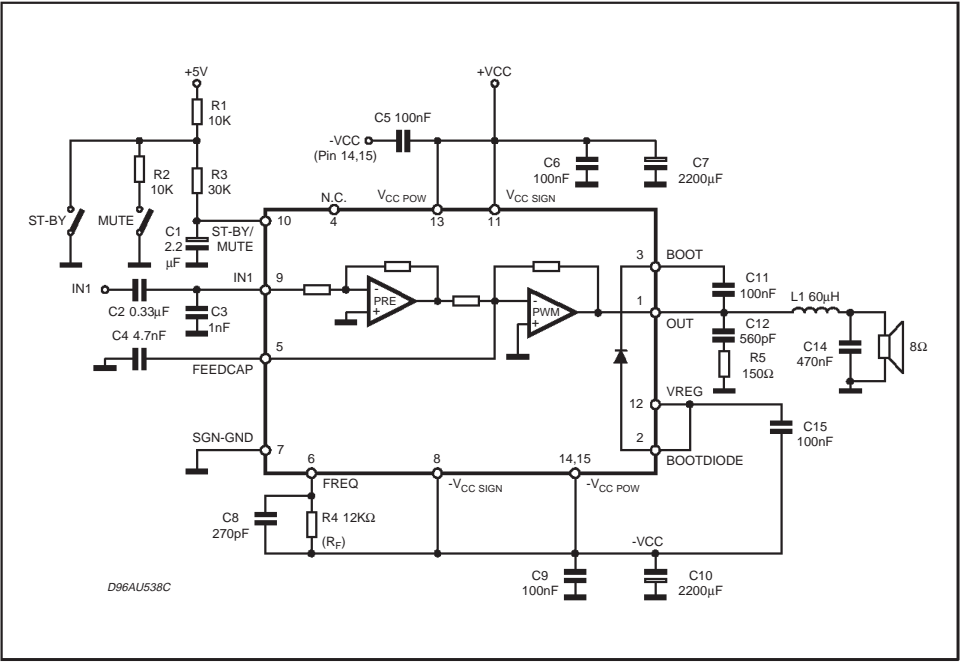


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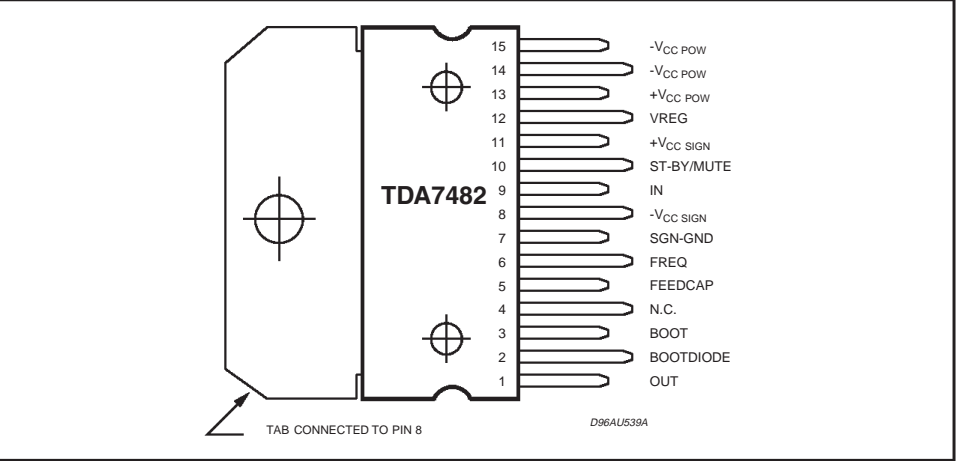
Figure 9-28 Internal block diagram and pin configuration

9.14.18 Diagram SA3, TDA7482 (7702)

Block Diagram



Pin Configuration (Top View)



F_15710_169.eps
230905

Figure 9-29 Internal block diagram and pin configuration

10. Spare Parts List

Sets Listed		
8670 000 23287	32PF9631D10	
8670 000 23308	42PF9831D/10	
8670 000 23603	42PF9631/69	
Set Level		
Various		
1004▲	8204 000 78151	LCD LC320WX2 (LPL)
1004▲	9322 240 80682	LCD LC420WX2 (LPL)
1012	3139 267 27821	Control Assy ME6 [E]
1017	3104 328 40891	Bottom I/O Assy [BE]
1064	3104 328 40322	Double AL Inv. Assy [AL]
1066	3104 328 40322	Double AL Inv. Assy [AL]
1068	3104 328 40322	Double AL Inv. Assy [AL]
1102	See table ch. 5	Serv. SSB (incl. keys)
1110	3104 328 43111	Control Assy TOP [E]
1112	3104 328 45811	IR/LED Panel TOP [J]
1112	3139 267 24441	IR/LED Panel ME6 [J]
1115	3104 328 42511	Side I/O Assy TOP [D]
1115	3139 267 17401	Side I/O Assy ME6 [D]
1131	2722 171 00372	AL Lamp Module 580L
1132	2722 171 00373	AL Lamp Module 580R
1133	2722 171 00369	AL Lamp Module 500L
1134	2722 171 00371	AL Lamp Module 500R
1135	2722 171 00369	AL Lamp Module 500L
1136	2722 171 00371	AL Lamp Module 500R
1151	3104 328 35441	Card Reader Assy
1152	3104 328 44921	Platform Supply Assy 42"
1180	2722 171 00364	PSU Module 117/230V
8000	3104 311 11831	Cable 5p/820/5p Bk Ferr.
8101	3104 311 10171	Cable 3p/1000/3p
8103	3104 311 06091	Cable 10p/680/10p
8103	3104 311 07391	Cable 10p/220/10p
8121▲	3104 311 06841	Cable 6p/820/6p
8121▲	3104 311 07831	Cable 6p/820/6p Wh
8136▲	3104 311 07471	Cable 11p/680/11p
8136	3104 311 10541	Cable 11p/1100/11p Wh
8142	3104 311 09051	Cable 5p/820/5p Wh
8142	3104 311 11371	Cable 5p/820/5p Wh
8146	3104 311 07951	Cable 41p/320/30p
8146	3104 311 08621	Cable 11p/220/11p
8150	3104 311 11681	Cable 41p/320/30p
8150	8204 000 78713	Cable 41p/320/30p
8199	3104 311 08251	Wire ring/180/Pos 4.8
8201	2422 076 00596	Cable USB-A 4p
8302	3104 311 00801	Cable 7p/220/7p
8302	3104 311 02341	Cable 7p/680/7p
8305▲	3104 311 00891	Cable 3p/220/3p
8306	3104 311 08361	Cable 2p3/400/2p3
8310	3104 311 10284	Cable 2p3/280/2p3
8364	3104 311 06061	Cable 9p/180/9p
8402	3104 311 11391	Cable 2p3/820/2p3 Bk
8408▲	3104 311 07691	Cable 2p3/280/Inlet
8410	3104 311 11441	Cable 10p/820/10p
8422▲	3104 311 11381	Cable 2p3/680/2p3 Wh
8510	3104 311 06841	Cable 6p/820/6p
8539	3104 311 06551	Cable 3p/1300/3p
8549	3104 311 11801	Cable 4p/1300/4p Bk
8608	3104 311 06941	Cable 6p/680/6p
8610	3104 311 11011	Cable 6p/1k3/6p Wh
8735	3104 311 02241	Cable Bk 2p3/820/2xPos
8735	3104 311 11271	Cable 2p3/560/2X Bk
8736	3104 311 06271	Cable Wh 2p3/560/2xPos
8736	3104 311 11201	Cable 2p3/820/2X Wh
8911	3104 311 08731	Cable POSI/100/POSI
LCD Supply 32" [A]		
Various		
1007▲	2422 086 00678	Fuse 5A T 250V
1305	4822 267 10735	Connector 3p
1306▲	2422 025 16374	Connector 2p m
1308	4822 265 20723	Connector 2p
1310	4822 265 20723	Connector 2p
1400▲	4822 253 50145	Fuse 3.15A T
1402	4822 252 60151	Surge protect
1410	4822 265 11253	Fuse holder
1411	4822 265 11253	Fuse holder
1450▲	2422 132 07411	Relay 1p 5V 5A
1M02	2422 025 11244	Connector 7p m
1M08	2422 025 08149	Connector 6p m
1M64	2422 025 10769	Connector 9p m
— —		
2000	2022 554 04157	1.5NF 250V 20%
2002	4822 124 11767	470μF 20% 25V
2003	4822 124 80061	1000μF 20% 25V
2007	4822 126 14583	470nF 10% 16V 0805
2008	4822 126 14583	470nF 10% 16V 0805
2009	2238 867 18101	100pF 1% 50V 0603
2010	4822 124 40207	100μF 20% 25V
2011	2222 375 24153	15nF 5% 1kV
2012	4822 126 13449	1nF 10% 2kV
2013	4822 126 13449	1nF 10% 2kV
2014▲	4822 126 13451	2.2nF 10% 2kV
2015	5322 126 11583	10nF 10% 50V 0603
2016	2238 586 59812	100nF 20% 50V 0603
2017	2222 375 24153	15nF 5% 1kV
2019	5322 126 11583	10nF 10% 50V 0603
2020	4822 124 12285	2200μF 20% 16V
2021	4822 124 12285	2200μF 20% 16V
2022	2020 024 90708	47μF 400V 20%
2023	4822 126 14583	470nF 10% 16V 0805
2024	2020 552 96326	220nF 10% 16V
2026	4822 126 14238	2.2nF 50V 0603
2028	5322 126 11578	1nF 10% 50V 0603
2032	4822 126 10206	2.2nF 10% 500V
2034	2238 867 18101	100pF 1% 50V 0603
2035	2238 867 18101	100pF 1% 50V 0603
2038	2020 024 90708	47μF 400V 20%
2039	4822 126 14583	470nF 10% 16V 0805
2040	4822 126 14249	560pF 10% 50V 0603
2044	5322 126 11578	1nF 10% 50V 0603
2046	3198 017 34730	47nF 16V 0603
2047	5322 126 11583	10nF 10% 50V 0603
2048	5322 126 11578	1nF 10% 50V 0603
2050	5322 126 11578	1nF 10% 50V 0603
2060	4822 126 14238	2.2nF 50V 0603
2061	4822 126 14238	2.2nF 50V 0603
2062	4822 126 14238	2.2nF 50V 0603
2063	4822 126 13881	470pF 5% 50V
2064	4822 126 13881	470pF 5% 50V
2065	4822 126 14238	2.2nF 50V 0603
2066	4822 122 31211	100pF 10% 500V
2067	4822 122 31211	100pF 10% 500V
2071	5322 126 11578	1nF 10% 50V 0603
2072	5322 126 11578	1nF 10% 50V 0603
2077	4822 126 14238	2.2nF 50V 0603
2290	5322 126 11583	10nF 10% 50V 0603
2291	4822 126 13881	470pF 5% 50V
2292	4822 124 40784	3300μF 20% 16V
2293	4822 126 13881	470pF 5% 50V
2294	4822 124 40784	3300μF 20% 16V
2400▲	2222 338 22474	470nF 20% 275V
2407▲	2022 554 04155	470pF 20% 250V
2816	2020 024 00001	330μF 20% 400V
— —		
3000▲	4822 052 10478	4.7Ω 5% 0.33W
3001	4822 051 30101	100Ω 5% 0.062W
3002	4822 051 30393	39kΩ 5% 0.062W
3003	4822 117 13632	100kΩ 1% 0603 0.62W
3004	4822 051 30273	27kΩ 5% 0.062W
3005	4822 051 30333	33kΩ 5% 0.062W
3006	4822 051 30103	10kΩ 5% 0.062W
3007	4822 051 30103	10kΩ 5% 0.062W
3008	4822 051 30331	330Ω 5% 0.062W
3009	4822 051 30332	3.3Ω 5% 0.062W
3010	4822 051 30471	47Ω 5% 0.062W
3011	4822 051 30471	47Ω 5% 0.062W
3012	4822 051 30153	15kΩ 5% 0.062W
3013	4822 051 30103	10kΩ 5% 0.062W
3014▲	4822 052 10101	100Ω 5% 0.33W
3015▲	4822 052 10479	47Ω 5% 0.33W
3016	4822 051 30332	3.3Ω 5% 0.062W
3017▲	4822 052 10101	100Ω 5% 0.33W
3018▲	4822 052 10479	47Ω 5% 0.33W
— —		
3019	4822 051 30332	3.3Ω 5% 0.062W
3020	4822 051 30332	3.3Ω 5% 0.062W
3021	4822 117 12971	15Ω 5% 0603 0.62W
3022	4822 051 30681	680Ω 5% 0.062W
3023	4822 051 30153	15kΩ 5% 0.062W
3024	3198 039 47040	470kΩ 1% MFLM
3025	3198 021 31820	1.8kΩ 5% 0.062W 0603
3026	2120 368 90118	Potm. lin. 470Ω hor.
3027	4822 117 13632	100kΩ 1% 0603 0.62W
3028	4822 051 30332	3.3Ω 5% 0.062W
3029	4822 051 30332	3.3Ω 5% 0.062W
3030	4822 051 30183	18kΩ 5% 0.062W
3031	4822 051 30103	10kΩ 5% 0.062W
3032	4822 051 30223	22kΩ 5% 0.062W
3033▲	4822 052 11108	1Ω 5% 0.5W
3034	4822 051 30102	1kΩ 5% 0.062W
3035	4822 051 30332	3.3Ω 5% 0.062W
3038	4822 050 22204	220kΩ 1% 0.6W
3040	3198 021 38220	8.2kΩ 5% 0.062W 0603
3041	4822 051 30333	33kΩ 5% 0.062W
3043	4822 051 30109	10Ω 5% 0.062W
3045	4822 117 12971	15Ω 5% 0603 0.62W
3046	4822 117 12971	15Ω 5% 0603 0.62W
3047	4822 051 30479	47Ω 5% 0.062W
3048	4822 051 30272	2.7kΩ 5% 0.062W
3050	4822 050 28204	820kΩ 1% 0.6W
3051	4822 051 30103	10kΩ 5% 0.062W
3052	4822 051 30153	15kΩ 5% 0.062W
3053	4822 050 26804	680kΩ 1% 0.6W
3055	4822 051 30221	220Ω 5% 0.062W
3056	4822 051 30221	220Ω 5% 0.062W
3057	4822 051 30221	220Ω 5% 0.062W
3058	4822 053 20565	5.6MΩ 5% 0.25W
3061	4822 051 30683	68kΩ 5% 0.062W
3064	4822 051 30103	10kΩ 5% 0.062W
3065	4822 117 13632	100kΩ 1% 0603 0.62W
3066	4822 051 30103	10kΩ 5% 0.062W
3067	4822 051 30101	100Ω 5% 0.062W
3068	4822 051 30222	2.2kΩ 5% 0.062W
3070	4822 051 30102	1kΩ 5% 0.062W
3071	4822 051 30103	10kΩ 5% 0.062W
3075	4822 051 30102	1kΩ 5% 0.062W
3100	4822 051 30109	10Ω 5% 0.062W
3292	4822 051 30561	560Ω 5% 0.062W
3400▲	2122 550 00158	VDR 1mA 612V
3401▲	4822 053 21475	4.7MΩ 5% 0.5W
3402▲	4822 053 21475	4.7MΩ 5% 0.5W
3403▲	4822 053 21475	4.7MΩ 5% 0.5W
3404	4822 116 83872	220Ω 5% 0.5W
3406	4822 051 30103	10kΩ 5% 0.062W
3408	4822 053 11223	22kΩ 5% 2W
3409	4822 051 10102	1kΩ 2% 0.25W
3410	4822 117 12925	47kΩ 1% 0.063W 0603
3999		

6008	4822 130 11397	BAS316
6009	4822 130 11152	UDZ18B
6010	4822 130 11397	BAS316
6011	4822 130 11397	BAS316
6012	9322 208 80685	BZG05C15
6013	9322 208 80685	BZG05C15
6017	4822 130 11397	BAS316
6020	4822 130 11397	BAS316
6022	4822 130 11148	UDZ4.7B
6023	4822 130 11397	BAS316
6027	4822 130 11397	BAS316
6028	4822 130 11397	BAS316
6031	9322 203 12673	BYV27-600
6032	9322 203 12673	BYV27-600
6033	9322 203 12673	BYV27-600
6034	9322 203 12673	BYV27-600
6044	9322 207 11687	STPS20L45CT
6045	9322 207 11687	STPS20L45CT
6051	4822 130 11397	BAS316
6077	9322 202 55685	BYG22D
6078	9322 202 55685	BYG22D
6079	9322 202 55685	BYG22D
6080	9322 202 55685	BYG22D
6081	9340 548 67115	PDZ22B
6291	4822 130 11572	STPS8H100F
6293	4822 130 11572	STPS8H100F
6460	4822 130 11397	BAS316
6461	4822 130 11397	BAS316
6465	9340 292 50135	BZG03-C200
6466	9340 292 50135	BZG03-C200
6467	9340 548 71115	PDZ33B
6506▲	4822 130 83147	DF06M
6807▲	9322 199 74682	GBJ6J-B15



7001	9322 108 21682	MC34067P
7002▲	9322 149 04682	TCET1102
7004	3198 010 42310	BC847BW
7005	9322 192 18687	STP15NK50ZFP
7006	9322 192 18687	STP15NK50ZFP
7007	3198 010 42320	BC857BW
7008	3198 010 42320	BC857BW
7009	3198 010 42320	BC857BW
7010	9322 192 16685	TS2431AI
7017	3198 010 42320	BC857BW
7018	3198 010 42310	BC847BW
7030	3198 010 42310	BC847BW
7807▲	9322 149 04682	TCET1102

AmbiLight Inverter Panel [AL]



Software

0801	3104 337 01552	Programmed P87 device
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Various

1010	2422 086 00657	Fuse 3A 125V F SMD
1011	2422 086 00657	Fuse 3A 125V F SMD
1060	2422 543 01431	Xtal 20MHz 16pF
1M08	2422 025 08149	Connector 6p m
1M09	2422 025 09406	Connector 4p m
1M10	2422 025 08149	Connector 6p m
1M11	2422 025 19068	Connector 11p m
1M12	2422 025 09406	Connector 4p m
1M13	2422 025 19068	Connector 11p m
1M15	2422 025 19069	Connector 3p m
1M16	2422 025 19069	Connector 3p m
1M39	2422 025 10768	Connector 3p m
1M49	2422 025 18884	Connector 4p m
1M59	2422 025 19265	Connector 5p m Bk



2001	2020 012 00018	1000µF 20% 16V
2002	2238 586 59812	100nF 20% 50V 0603
2013	2238 916 15641	22nF 10% 25V 0603
2014	2238 916 15641	22nF 10% 25V 0603
2015	2238 916 15641	22nF 10% 25V 0603
2016	3198 034 01590	15pF 1% 50V 0402
2017	5322 126 11578	1nF 10% 50V 0603
2018	5322 126 11578	1nF 10% 50V 0603
2019	5322 126 11578	1nF 10% 50V 0603
2023	5322 126 11578	1nF 10% 50V 0603
2024	2238 586 59812	100nF 20% 50V 0603
2073	3198 034 01590	15pF 1% 50V 0402
2078	5322 126 11583	10nF 10% 50V 0603
2086	5322 126 11578	1nF 10% 50V 0603
2101	2020 012 00018	1000µF 20% 16V

2102	2238 586 59812	100nF 20% 50V 0603
2113	2238 916 15641	22nF 10% 25V 0603
2114	2238 916 15641	22nF 10% 25V 0603
2115	2238 916 15641	22nF 10% 25V 0603
2173	5322 126 11583	10nF 10% 50V 0603
2174	5322 126 11583	10nF 10% 50V 0603
2177	5322 126 11578	1nF 10% 50V 0603
2201	2020 552 96684	470nF 10% 25V 0805



3004	4822 051 20471	470Ω 5% 0.1W
3005	4822 051 20561	560Ω 5% 0.1W
3006	2322 762 60102	1kΩ 5% 2512
3007	2322 762 60102	1kΩ 5% 2512
3008	4822 051 20471	470Ω 5% 0.1W
3009	4822 051 20561	560Ω 5% 0.1W
3010	2322 762 60102	1kΩ 5% 2512
3011	2322 762 60102	1kΩ 5% 2512
3012	4822 051 20471	470Ω 5% 0.1W
3013	4822 051 20561	560Ω 5% 0.1W
3014	2322 762 60102	1kΩ 5% 2512
3015	2322 762 60102	1kΩ 5% 2512
3016	4822 051 30472	4.7Ω 5% 0.062W
3017	4822 051 30472	4.7Ω 5% 0.062W
3018	4822 051 30472	4.7Ω 5% 0.062W
3019	4822 051 30472	4.7Ω 5% 0.062W
3020	4822 051 30472	4.7Ω 5% 0.062W
3021	4822 051 30101	100Ω 5% 0.062W
3022	4822 051 30472	4.7Ω 5% 0.062W
3023	4822 051 30101	100Ω 5% 0.062W
3024	4822 051 30472	4.7Ω 5% 0.062W
3025	4822 051 30472	4.7Ω 5% 0.062W
3027	5322 117 13028	12kΩ 1% 0.063W 0603
3028	4822 051 30103	10kΩ 5% 0.062W
3029	4822 051 30472	4.7Ω 5% 0.062W
3030	4822 051 30472	4.7Ω 5% 0.062W
3031	4822 051 30472	4.7Ω 5% 0.062W
3032	4822 053 20105	1MΩ 5% 0.25W
3034	4822 051 30479	47Ω 5% 0.062W
3035	4822 051 30479	47Ω 5% 0.062W
3036	4822 051 30479	47Ω 5% 0.062W
3037	4822 051 30561	560Ω 5% 0.062W
3038	4822 051 30561	560Ω 5% 0.062W
3041	4822 051 30221	220Ω 5% 0.062W
3060	4822 051 20332	2.3kΩ 5% 0.1W
3061	4822 051 20332	2.3kΩ 5% 0.1W
3062	4822 051 20332	2.3kΩ 5% 0.1W
3064	4822 051 30683	68kΩ 5% 0.062W
3065	4822 051 30683	68kΩ 5% 0.062W
3104	4822 051 20471	470Ω 5% 0.1W
3105	4822 051 20561	560Ω 5% 0.1W
3106	2322 762 60102	1kΩ 5% 2512
3107	2322 762 60102	1kΩ 5% 2512
3108	4822 051 20471	470Ω 5% 0.1W
3109	4822 051 20561	560Ω 5% 0.1W
3110	2322 762 60102	1kΩ 5% 2512
3111	2322 762 60102	1kΩ 5% 2512
3112	4822 051 20471	470Ω 5% 0.1W
3113	4822 051 20561	560Ω 5% 0.1W
3114	2322 762 60102	1kΩ 5% 2512
3115	2322 762 60102	1kΩ 5% 2512
3117	4822 051 30472	4.7Ω 5% 0.062W
3118	4822 051 30472	4.7Ω 5% 0.062W
3119	4822 051 30472	4.7Ω 5% 0.062W
3120	4822 051 30472	4.7Ω 5% 0.062W
3124	4822 051 30472	4.7Ω 5% 0.062W
3125	4822 051 30472	4.7Ω 5% 0.062W
3129	4822 051 30472	4.7Ω 5% 0.062W
3130	4822 051 30472	4.7Ω 5% 0.062W
3131	4822 051 30472	4.7Ω 5% 0.062W
3132	4822 051 30479	47Ω 5% 0.062W
3133	4822 051 30479	47Ω 5% 0.062W
3134	4822 051 30479	47Ω 5% 0.062W
3136	4822 117 12925	47kΩ 1% 0.063W 0603
3137	5322 117 13028	12kΩ 1% 0.063W 0603
3150	4822 051 20332	2.3kΩ 5% 0.1W
3151	4822 051 20332	2.3kΩ 5% 0.1W
3152	4822 051 20332	2.3kΩ 5% 0.1W
3153	4822 051 30101	100Ω 5% 0.062W
3154	4822 051 30101	100Ω 5% 0.062W
3155	4822 051 30333	33kΩ 5% 0.062W
3156	4822 051 30103	10kΩ 5% 0.062W
3157	4822 051 30101	100Ω 5% 0.062W
3160	4822 051 30103	10kΩ 5% 0.062W
3161	4822 051 30101	100Ω 5% 0.062W
3162	4822 051 30101	100Ω 5% 0.062W
3163	4822 051 30101	100Ω 5% 0.062W
3164	4822 051 30333	33kΩ 5% 0.062W
3200	4822 051 10102	1kΩ 2% 0.25W
3201	4822 051 10102	1kΩ 2% 0.25W
3202	4822 051 30479	47Ω 5% 0.062W
3203	4822 051 20105	1MΩ 5% 0.1W

3204	4822 051 30103	10kΩ 5% 0.062W
3205	4822 051 30102	1kΩ 5% 0.062W
3206	4822 051 30221	220Ω 5% 0.062W
3207	4822 051 30223	22kΩ 5% 0.062W
3208	4822 051 10102	1kΩ 2% 0.25W
3209	4822 051 10102	1kΩ 2% 0.25W
3210	4822 051 30479	47Ω 5% 0.062W
3211	4822 051 20105	1MΩ 5% 0.1W
3212	4822 051 30221	220Ω 5% 0.062W
9001	4822 051 10008	Jumper 1206



5002	2422 536 00923	22µH 10% LHL10
5007	2422 536 00923	22µH 10% LHL10
5008	2422 536 00923	22µH 10% LHL10
5011	2422 549 42896	Bead 120Ω 100MHz
5014	2422 531 00128	BD21506-01
5015	2422 531 00128	BD21506-01
5016	2422 531 00128	BD21506-01
5102	2422 536 00923	22µH 10% LHL10
5107	2422 536 00923	22µH 10% LHL10
5108	2422 536 00923	22µH 10% LHL10
5114	2422 531 00128	BD21506-01
5115	2422 531 00128	BD21506-01
5116	2422 531 00128	BD21506-01
5200	2422 549 42896	Bead 120Ω 100MHz
5201	4822 526 10697	MMZ2012S601AT
5202	4822 526 10697	MMZ2012S601AT
5203	2422 549 42896	Bead 120Ω 100MHz
5204	4822 526 10697	MMZ2012S601AT
5205	4822 526 10697	MMZ2012S601AT



6000	4822 130 11397	BAS316
6001	4822 130 11397	BAS316
6002	4822 130 11397	BAS316
6003	4822 130 11397	BAS316
6004	4822 130 11397	BAS316
6005	4822 130 11397	BAS316
6006	4822 130 11152	UDZ18B
6007	4822 130 11152	UDZ18B
6008	4822 130 11152	UDZ18B
6009	4822 130 11152	UDZ18B
6010	4822 130 11152	UDZ18B
6011	4822 130 11152	UDZ18B
6013	4822 130 11397	BAS316
6014	4822 130 11397	BAS316
6015	4822 130 11397	BAS316
6016	4822 130 11397	BAS316
6017	4822 130 11522	UDZ15B
6018	4822 130 11397	BAS316
6019	4822 130 11551	UDZS10B
6020	4822 130 11397	BAS316
6100	4822 130 11397	BAS316
6101	4822 130 11397	BAS316
6102	4822 130 11397	BAS316
6103	4822 130 11397	BAS316
6104	4822 130 11397	BAS316
6105	4822 130 11397	BAS316
6106	4822 130 11152	UDZ18B
6107	4822 130 11152	UDZ18B
6108	4822 130 11152	UDZ18B
6109	4822 130 11152	UDZ18B
6110	4822 130 11152	UDZ18B
6111	4822 130 11152	UDZ18B
6112	4822 130 11148	UDZ4.7B
6113	4822 130 11397	BAS316
6114	4822 130 11397	BAS316
6115	4822 130 11397	BAS316
6117	4822 130 11397	BAS316
6118	4822 130 11551	UDZS10B
6119	4822 130 11397	BAS316
6120	4822 130 11397	BAS316
6121	4822 130 11397	BAS316
6200	4822 130 11397	BAS316
6201	4822 130 11397	BAS316
6202	4822 130 11416	PDZ6.8B
6203	4822 130 11397	BAS316
6204	4822 130 11397	BAS316
6205	4822 130 11416	PDZ6.8B
6206	9322 129 41685	BZM55-C12



7002	9322 202 58668	LD1117DT50
7009	3198 010 42310	BC847BW
7010	3198 010 42310	BC847BW
7011	3198 010 42310	BC847BW
7015	9322 214 20668	SI4946EY
7016	9322 214 20668	SI4946EY

7017	9322 214 20668	SI4946EY
7018	3198 010 42310	BC847BW
7019	3198 010 42310	BC847BW
7020	3198 010 42310	BC847BW
7109	3198 010 42310	BC847BW
7110	3198 010 42310	BC847BW
7111	3198 010 42310	BC847BW
7115	9322 214 20668	SI4946EY
7116	9322 214 20668	SI4946EY
7117	9322 214 20668	SI4946EY
7118	3198 010 42310	BC847BW
7119	3198 010 42310	BC847BW
7120	3198 010 42310	BC847BW
7130	9340 425 10115	BC857BS
7132	9340 425 10115	BC857BS
7200	9322 217 55685	FET SI2302ADS-E3
7201▲	9322 149 04682	TCET1102
7202	9322 217 55685	FET SI2302ADS-E3
7999		For SW See 0801

LCD Platform Supply 42” [AP]

Various

1F10	4822 267 10565	Connector 4p
1M02	2422 025 11244	Connector 7p m
1M03	2422 025 10771	Connector 10p m
1M10	2422 025 08149	Connector 6p m
1M46	2422 025 10655	Connector 11p m
1M63	2422 025 09405	Connector 2p m
1P02	2422 025 16374	Connector 2p m
1P03	2422 086 00717	Fuse 1.6A T 250V
1P06	2422 086 00678	Fuse 5A T 250V
1P07	2422 086 00678	Fuse 5A T 250V
1P10	4822 267 10557	Connector 10p
1P22	4822 265 20723	Connector 2p
1P30	2422 086 00663	Fuse 1A T 250V



2F00	2020 024 90753	100µF 450V 20%
2P01	2022 552 05679	1µF 10% 16V 0805
2P03	2022 552 05679	1µF 10% 16V 0805
2P04	2022 552 05679	1µF 10% 16V 0805
2P05	4822 124 81151	22µF 50V
2P06	2022 554 04154	220pF 10% 250V
2P11	2022 552 05679	1µF 10% 16V 0805
2P12	2238 586 59812	100nF 20% 50V 0603
2P13	2238 586 59812	100nF 20% 50V 0603
2P14	4822 121 70162	10nF 5% 400V
2P21	2238 586 59812	100nF 20% 50V 0603
2P22	2020 552 96683	220nF 10% 50V
2P23	5322 126 11578	1nF 10% 50V 0603
2P24	2022 552 05679	1µF 10% 16V 0805
2P25	2252 053 63221	220pF 10% 200V 0805
2P26	2020 552 96683	220nF 10% 50V
2P27	3198 038 41020	1000µF 20% 35V
2P28	3198 038 41020	1000µF 20% 35V
2P29	3198 038 41020	1000µF 20% 35V
2P30	3198 038 41020	1000µF 20% 35V
2P31	2238 586 59812	100nF 20% 50V 0603
2P33	2238 586 59812	100nF 20% 50V 0603
2P34	2020 552 96683	220nF 10% 50V
2P35	2020 552 96683	220nF 10% 50V
2P36	2238 586 59812	100nF 20% 50V 0603
2P37	2238 586 59812	100nF 20% 50V 0603
2P38	2238 586 59812	100nF 20% 50V 0603
2P39	5322 126 11583	10nF 10% 50V 0603
2P42	2252 053 63221	220pF 10% 200V 0805
2P43	2252 053 63221	220pF 10% 200V 0805
2P45	2238 586 59812	100nF 20% 50V 0603
2P47	4822 124 80061	1000µF 20% 25V
2P48	4822 124 80061	1000µF 20% 25V
2P49	4822 124 80061	1000µF 20% 25V
2P50	4822 124 80061	1000µF 20% 25V
2P53	2020 552 94427	100pF 5% 50V
2P55	2020 552 96683	220nF 10% 50V
2P57	2020 552 96683	220nF 10% 50V
2P64	2252 053 63221	220pF 10% 200V 0805
2P80	2020 552 96683	220nF 10% 50V
2S04	4822 126 13682	100pF 5% 1kV
2S06	2022 554 04154	220pF 10% 250V
2S07	3198 017 34730	47nF 16V 0603
2S13	2222 930 56627	2.2nF 10% 200V 0805
2S14	4822 124 12379	220µF 25V
2S15	2022 552 05679	1µF 10% 16V 0805
2S16	4822 124 81151	22µF 50V
2S17	4822 124 81151	22µF 50V
2S18	3198 017 34730	47nF 16V 0603
2S33	4822 124 40207	100µF 20% 25V
2S39	2022 552 05679	1µF 10% 16V 0805

2S40	4822 121 70162	10nF 5% 400V
2S41	2020 552 96683	220nF 10% 50V
2S50	2020 021 91668	2200µF 20% 10V
2S52	4822 121 70162	10nF 5% 400V
2S54	3198 017 31530	15nF 20% 50V 0603
2S56	2020 552 96683	220nF 10% 50V



3999	4822 051 30472	4.7Ω 5% 0.062W
3F01	2322 251 41229	22Ω 5% 5W RMW05L
3F02	2322 251 41229	22Ω 5% 5W RMW05L
3F05	3198 012 24730	47kΩ 5%
3F06	3198 012 24730	47kΩ 5%
3P00	4822 117 10833	10kΩ 1% 0.1W
3P01	4822 117 10833	10kΩ 1% 0.1W
3P02	4822 117 10833	10kΩ 1% 0.1W
3P03	4822 117 10833	10kΩ 1% 0.1W
3P04	2322 734 63309	33Ω 1% 0.1W 0805
3P05	4822 051 30223	22kΩ 5% 0.062W
3P08	2322 193 14477	0.47Ω 5%
3P09	4822 051 30223	22kΩ 5% 0.062W
3P10	4822 051 30223	22kΩ 5% 0.062W
3P11	4822 117 13632	100kΩ 1% 0603 0.62W
3P12	4822 051 30474	470kΩ 5% 0.062W
3P13	4822 117 12925	47kΩ 1% 0.063W 0603
3P14	4822 117 12925	47kΩ 1% 0.063W 0603
3P15	4822 051 30102	1kΩ 5% 0.062W
3P16	4822 051 30109	10Ω 5% 0.062W
3P17	4822 051 30223	22kΩ 5% 0.062W
3P18	4822 051 30223	22kΩ 5% 0.062W
3P19	4822 117 12891	220kΩ 1%
3P20	4822 051 30103	10kΩ 5% 0.062W
3P21	4822 051 30103	10kΩ 5% 0.062W
3P22	4822 051 30474	470kΩ 5% 0.062W
3P23	5322 117 13053	6.8kΩ 1% 0.063W 0603
3P24	4822 117 12891	220kΩ 1%
3P26	4822 051 30103	10kΩ 5% 0.062W
3P27	4822 051 30123	12kΩ 5% 0.1W
3P28	3198 012 24730	47kΩ 5%
3P29	4822 053 11471	470Ω 5% 2W
3P30	4822 117 13632	100kΩ 1% 0603 0.62W
3P31	4822 051 30102	1kΩ 5% 0.062W
3P33	4822 051 30471	47Ω 5% 0.062W
3P34	4822 051 30222	2.2kΩ 5% 0.062W
3P36	4822 051 30471	47Ω 5% 0.062W
3P38	4822 117 12925	47kΩ 1% 0.063W 0603
3P39	4822 117 12925	47kΩ 1% 0.063W 0603
3P40	4822 117 12925	47kΩ 1% 0.063W 0603
3P41	4822 117 12891	220kΩ 1%
3P42	4822 051 30222	2.2kΩ 5% 0.062W
3P43	4822 051 30222	2.2kΩ 5% 0.062W
3P44	4822 051 30222	2.2kΩ 5% 0.062W
3P45	4822 051 30105	1MΩ 5% 0.062W
3P46	4822 117 12925	47kΩ 1% 0.063W 0603
3P47	4822 051 30472	4.7Ω 5% 0.062W
3P48	2322 734 63309	33Ω 1% 0.1W 0805
3P50	4822 117 12971	15Ω 5% 0603 0.62W
3P51	4822 117 13632	100kΩ 1% 0603 0.62W
3P52	4822 051 30103	10kΩ 5% 0.062W
3P53	4822 051 30223	22kΩ 5% 0.062W
3P54	4822 051 30103	10kΩ 5% 0.062W
3P55	4822 051 30331	330Ω 5% 0.062W
3P59	4822 051 30102	1kΩ 5% 0.062W
3P60	2322 193 14477	0.47Ω 5%
3P61	4822 051 30471	47Ω 5% 0.062W
3P62	4822 051 30102	1kΩ 5% 0.062W
3P63	4822 051 30102	1kΩ 5% 0.062W
3P64	4822 117 12925	47kΩ 1% 0.063W 0603
3P65	5322 117 13053	6.8kΩ 1% 0.063W 0603
3P66	5322 117 13046	1.8kΩ 1% 0.063W 0603
3P68	4822 051 30223	22kΩ 5% 0.062W
3P70	4822 051 30223	22kΩ 5% 0.062W
3P71	4822 051 30102	1kΩ 5% 0.062W
3P72	4822 051 30334	330kΩ 5% 0.062W
3P73	4822 051 30223	22kΩ 5% 0.062W
3P74	4822 051 30223	22kΩ 5% 0.062W
3P75	4822 051 30472	4.7Ω 5% 0.062W
3P76	4822 117 12891	220kΩ 1%
3P77	2322 193 14332	3.3kΩ 5% 1W
3P78	4822 051 30472	4.7Ω 5% 0.062W
3P79	4822 051 30272	2.7kΩ 5% 0.062W
3P80	4822 051 30272	2.7kΩ 5% 0.062W
3P81	4822 051 30223	22kΩ 5% 0.062W
3P82	4822 051 30222	2.2kΩ 5% 0.062W
3P83	4822 051 30332	3.3Ω 5% 0.062W
3P84	4822 051 30332	3.3Ω 5% 0.062W
3P85	4822 051 30272	2.7kΩ 5% 0.062W
3P86	4822 051 30331	330Ω 5% 0.062W
3P87	4822 051 30222	2.2kΩ 5% 0.062W
3P88	4822 051 30102	1kΩ 5% 0.062W
3P89	4822 051 30332	3.3Ω 5% 0.062W
3P90	4822 051 30154	150kΩ 5% 0.062W

3P91	4822 051 30333	33kΩ 5% 0.062W
3P92	4822 051 30102	1kΩ 5% 0.062W
3P93	4822 117 13632	100kΩ 1% 0603 0.62W
3P94	5322 117 13053	6.8kΩ 1% 0.063W 0603
3P96	4822 051 30222	2.2kΩ 5% 0.062W
3P97	5322 117 13053	6.8kΩ 1% 0.063W 0603
3P98	5322 117 13053	6.8kΩ 1% 0.063W 0603
3P99	5322 117 13046	1.8kΩ 1% 0.063W 0603
3S01	4822 051 30103	10kΩ 5% 0.062W
3S02	4822 051 30103	10kΩ 5% 0.062W
3S03	4822 051 30103	10kΩ 5% 0.062W
3S04	4822 051 30103	10kΩ 5% 0.062W
3S08	2322 193 14278	2.7Ω 5%
3S14	4822 051 30222	2.2kΩ 5% 0.062W
3S15	4822 051 30103	10kΩ 5% 0.062W
3S16	4822 051 30101	100Ω 5% 0.062W
3S17	4822 051 20479	47Ω 5% 0.1W
3S18	4822 051 30102	1kΩ 5% 0.062W
3S20	4822 117 12864	82kΩ 5% 0.6W
3S21	4822 051 30102	1kΩ 5% 0.062W
3S22	4822 051 20479	47Ω 5% 0.1W
3S23	5322 117 13053	6.8kΩ 1% 0.063W 0603
3S24	5322 117 13053	6.8kΩ 1% 0.063W 0603
3S28	3198 021 32290	22Ω 5% 0603
3S29	4822 051 30471	47Ω 5% 0.062W
3S30	4822 051 30123	12kΩ 5% 0.1W
3S31	4822 051 30124	120kΩ 5% 0.062W
3S32	4822 051 30334	330kΩ 5% 0.062W
3S33	4822 051 30333	33kΩ 5% 0.062W
3S34	4822 051 30333	33kΩ 5% 0.062W
3S35	4822 051 30472	4.7Ω 5% 0.062W
3S36	4822 051 30472	4.7Ω 5% 0.062W
3S37	4822 051 30102	1kΩ 5% 0.062W
3S39	3198 021 34780	4.7Ω 5% 0603
3S41	4822 051 30471	47Ω 5% 0.062W
3S50	3198 021 32290	22Ω 5% 0603
3S51	2322 193 14104	100kΩ 5%
3S59	4822 117 12891	220kΩ 1%
3S76	4822 051 30103	10kΩ 5% 0.062W
9P04	4822 051 20008	Jumper 0805
9P58	4822 051 20008	Jumper 0805
9P80	4822 051 20008	Jumper 0805
9P81	4822 051 20008	Jumper 0805



5F00▲	4822 157 11523	Line filter 5mH/2A
5P00	2422 531 00131	Transf. BS25515-00
5P01	2422 531 00131	Transf. BS25515-00
5P03	4822 157 50961	22μH
5P04	4822 157 11411	Bead 80Ω at 100MHz
5P05	4822 526 10704	Bead 50 Ω at 100MHz
5P06	4822 157 11411	Bead 80Ω at 100MHz
5P07	4822 157 11411	Bead 80Ω at 100MHz
5P08	4822 526 10704	Bead 50 Ω at 100MHz
5P09▲	4822 157 11832	400UH 3A
5P10	2422 549 00169	Bead 45Ω at 100MHz
5P11	2422 549 00169	Bead 45Ω at 100MHz
5P12	2422 549 00169	Bead 45Ω at 100MHz
5P13	2422 549 00169	Bead 45Ω at 100MHz
5P16	4822 157 11411	Bead 80Ω at 100MHz
5P18	2422 535 94636	3.3μF 20%
5P19	2422 535 94636	3.3μF 20%
5P20	2422 535 94636	3.3μF 20%
5P21	2422 549 44197	Bead 220Ω at 100MHz
5P22	2422 549 44197	Bead 220Ω at 100MHz
5P23	2422 549 44197	Bead 220Ω at 100MHz
5P24	2422 549 44197	Bead 220Ω at 100MHz
5P25	4822 157 11716	Bead 30Ω at 100MHz
5P26	4822 157 11716	Bead 30Ω at 100MHz
5P27	4822 157 11716	Bead 30Ω at 100MHz
5P28	4822 157 11716	Bead 30Ω at 100MHz
5S00	3104 308 21181	BS25320-00
5S01	4822 157 11828	22μH 20% 0805
5S03	4822 526 10704	Bead 50 Ω at 100MHz
5S05	4822 157 11411	Bead 80Ω at 100MHz
5S08	4822 526 10704	Bead 50 Ω at 100MHz
5S09	4822 157 11411	Bead 80Ω at 100MHz
5S10	2422 549 43769	Bead 30Ω at 100MHz
5S11	4822 157 11411	Bead 80Ω at 100MHz
5S12	4822 526 10704	Bead 50 Ω at 100MHz
5S14	2422 549 44197	Bead 220Ω at 100MHz
5S15	2422 549 44197	Bead 220Ω at 100MHz
5S16	4822 157 11716	Bead 30Ω at 100MHz

6P06	9322 099 61685	BYG10J	1C51	2422 549 44369	SAW 38.9MHz K9656L	2A88	2238 586 59812	100nF 20% 50V 0603
6P07	9322 099 61685	BYG10J	1C52	2422 549 44372	SAW 38.9MHz K3953L	2A89	2238 586 59812	100nF 20% 50V 0603
6P09	4822 130 11522	UDZ15B	1D42	2422 025 18739	Connector 5p m	2A90	2022 552 05679	1µF 10% 16V 0805
6P10	9322 202 75687	BYW29FP-200	1E50	2422 025 17601	Connector 40p f	2A91	4822 126 14324	33pF 5% 50V 0402
6P11	9322 202 75687	BYW29FP-200	1F01	2422 540 00017	Reson. 60MHz CSTCW	2A92	4822 126 14324	33pF 5% 50V 0402
6P12	9322 202 75687	BYW29FP-200	1F02	2422 025 18741	Connector 6p m	2A93	2238 586 59812	100nF 20% 50V 0603
6P13	9322 202 75687	BYW29FP-200	1G50	2422 025 18973	Conn. 41p f 0.5 smd	2A96	2022 552 05679	1µF 10% 16V 0805
6P14	4822 130 11397	BAS316	1H00	2422 543 01397	Xtal 27MHz 18pF	2A97	2022 552 05679	1µF 10% 16V 0805
6P15	4822 130 11397	BAS316	1H01	2422 025 17775	Socket USB 4p f	2A98	4822 126 14324	33pF 5% 50V 0402
6P22	4822 130 11522	UDZ15B	1I00	2422 026 04811	Sock. Cinch 3p f BkWhRd	2A99	4822 126 14324	33pF 5% 50V 0402
6P23	4822 130 11522	UDZ15B	1I01	2422 026 04811	Sock. Cinch 3p f BkWhRd	2B00	2238 586 59812	100nF 20% 50V 0603
6P27	9322 202 55685	BYG22D	1I02	2422 026 05079	Socket Cinch 3p f	2B01	2238 586 59812	100nF 20% 50V 0603
6P31	4822 130 11522	UDZ15B	1I10	2422 025 16984	Connector 15p f	2B04	2238 586 59812	100nF 20% 50V 0603
6P47	9322 208 44685	BZG05C6V8	1I11	2422 026 05548	Socket phone 1p f	2B05	2238 586 59812	100nF 20% 50V 0603
6P50	4822 130 11522	UDZ15B	1LA0	2422 543 01443	Xtal 16MHz 20pF	2B07	3198 034 01580	1.5pF 1% 50V 0402
6P51	4822 130 11416	PDZ6.8B	1M01	2422 025 18738	Connector 3p m	2B08	2238 869 15109	10pF 5% 50V 0402
6P52	4822 130 11522	UDZ15B	1M02	2422 025 11244	Connector 7p m	2B09	3198 034 01580	1.5pF 1% 50V 0402
6P53	4822 130 11397	BAS316	1M03	2422 025 18734	Connector 11p m	2B10	2238 869 15109	10pF 5% 50V 0402
6P80	4822 130 11397	BAS316	1M15	4822 267 10459	Connector 3p	2B11	2020 552 96628	10nF 10% 16V 0402
6P81	4822 130 11152	UDZ18B	1M21	2422 025 08149	Connector 6p m	2B14	3198 034 01580	1.5pF 1% 50V 0402
6P82	4822 130 11397	BAS316	1M36	2422 025 18735	Connector 11p m	2B15	2238 869 15109	10pF 5% 50V 0402
6P83	4822 130 11397	BAS316	1M46	2422 025 18735	Connector 11p m	2B16	3198 034 01580	1.5pF 1% 50V 0402
6P84	4822 130 11397	BAS316	1M59	2422 025 19265	Connector 5p m Bk	2B17	2238 869 15109	10pF 5% 50V 0402
6P85	4822 130 11397	BAS316	1N00	2422 543 01095	Res. 12MHz DSX840	2B20	3198 034 01580	1.5pF 1% 50V 0402
6S01	5322 130 31938	BYV27-200	1O00	2422 543 01398	Xtal 25MHz 18p	2B21	2020 552 96628	10nF 10% 16V 0402
6S04	9340 548 69115	PDZ27B	1O10	2422 025 18056	Jack 8p Ethernet	2B22	2020 552 96628	10nF 10% 16V 0402
6S05	4822 130 11522	UDZ15B	1P01	2422 025 19501	Socket PCMCIA H 68P f	2B23	2020 552 96628	10nF 10% 16V 0402
6S07	4822 130 11572	STPS8H100F	1P01	2422 033 00364	Connector smartcard	2B24	2020 552 96628	10nF 10% 16V 0402
6S09	4822 130 11522	UDZ15B	1T03	3139 147 22181	Tuner UV1318ST/AIHN-3	2B25	2020 552 96628	10nF 10% 16V 0402
6S10	9322 102 64685	UDZ2.7B	1U01▲	2422 086 00623	Fuse 3A T 125V	2B26	2020 552 96628	10nF 10% 16V 0402
6S11	4822 130 11397	BAS316	1U04▲	2422 086 00623	Fuse 3A T 125V	2B27	2020 552 96628	10nF 10% 16V 0402
6S12	9322 202 55685	BYG22D	1W05	3112 297 14831	Tuner TD1316AF/PHP-3	2B28	2020 552 96628	10nF 10% 16V 0402
6S13	4822 130 11397	BAS316	1W20	2422 025 18779	Connector 4p m	2B29	2020 552 96628	10nF 10% 16V 0402
6S30	9322 203 12673	BYV27-600	8235	3104 311 08801	Flex foil 40p/140/40p	2B30	2020 552 96628	10nF 10% 16V 0402
6S31	4822 130 11522	UDZ15B	8299	3104 301 08351	Cable phono/140/phono	2B31	2020 552 96628	10nF 10% 16V 0402
6S47	9322 208 44685	BZG05C6V8	8408▲	3104 311 06951	Cable 2p3/180/2p	2B32	2238 869 15109	10pF 5% 50V 0402
6S49	3198 020 55680	BZX384-C5V6				2B33	3198 034 01580	1.5pF 1% 50V 0402



7P02	9322 194 26687	STP6NK60Z
7P03	9322 192 16685	TS2431AI
7P04	3198 010 42310	BC847BW
7P06	9340 219 30115	BC817-25W
7P07	3198 010 42320	BC857BW
7P09	3198 010 42310	BC847BW
7P10	3198 010 42310	BC847BW
7P11▲	9322 149 04682	TCET1102
7P12▲	9322 149 04682	TCET1102
7P14	9340 557 69127	PHX9NQ20T
7P15	3198 010 42310	BC847BW
7P16	9322 192 16685	TS2431AI
7P17	3198 010 42310	BC847BW
7P18	9340 436 50115	BSP030
7P19	3198 010 42310	BC847BW
7P20	9340 436 50115	BSP030
7P21	3198 010 42310	BC847BW
7P22	3198 010 42320	BC857BW
7P23	9340 436 50115	BSP030
7P24	3198 010 42320	BC857BW
7P26	9340 219 30115	BC817-25W
7P27	9352 743 34518	TEA1506AT/N1
7P38	3198 010 42310	BC847BW
7P80	3198 010 42310	BC847BW
7P81	9322 192 16685	TS2431AI
7P82	3198 010 42320	BC857BW
7S02	9322 194 26687	STP6NK60Z
7S03▲	9322 149 04682	TCET1102
7S04	9322 192 16685	TS2431AI
7S10	9352 700 18518	TEA1533AT/N1
7S11	9340 219 30115	BC817-25W
7S31	9340 436 50115	BSP030
7S40	3198 010 42310	BC847BW

Small Signal Board [B]



Software (see Philips Service Website)

0802 Downloadable ZIP file

Various

1735	2422 025 16382	Connector 3p m
1736	4822 267 10735	Connector 3p
1738	4822 267 10565	Connector 4p
1A33	2422 086 11092	Fuse 500mA 50V F SMD
1A51	2422 549 44369	SAW 38.9MHz K9656L
1A52	2422 549 44372	SAW 38.9MHz K3953L
1B01	2422 033 00018	Connector 19p f
1B02	2422 033 00018	Connector 19p f
1C33▲	2422 086 11092	Fuse 500mA 50V F SMD



2A01	2238 787 15641	22nF 5% 16V 0402
2A02	2238 787 15641	22nF 5% 16V 0402
2A03	2238 787 15641	22nF 5% 16V 0402
2A06	2238 787 15641	22nF 5% 16V 0402
2A07	2238 787 15641	22nF 5% 16V 0402
2A08	2238 787 15641	22nF 5% 16V 0402
2A09	2238 787 15641	22nF 5% 16V 0402
2A10	2020 552 96628	10nF 10% 16V 0402
2A12	2238 787 15641	22nF 5% 16V 0402
2A13	2238 787 15641	22nF 5% 16V 0402
2A15	2238 787 15641	22nF 5% 16V 0402
2A16	2238 787 15641	22nF 5% 16V 0402
2A17	2238 787 15641	22nF 5% 16V 0402
2A18	2238 787 15641	22nF 5% 16V 0402
2A19	2238 787 15641	22nF 5% 16V 0402
2A20	2238 787 15641	22nF 5% 16V 0402
2A21	2020 004 90283	10µF 20% 10V 1206
2A22	2238 586 59812	100nF 20% 50V 0603
2A23	2238 787 15641	22nF 5% 16V 0402
2A25	4822 124 23002	10µF 16V
2A27	2238 586 59812	100nF 20% 50V 0603
2A28	2238 586 59812	100nF 20% 50V 0603
2A29	4822 124 23002	10µF 16V
2A30	2022 552 05679	1µF 10% 16V 0805
2A31	2020 552 96628	10nF 10% 16V 0402
2A33	2020 552 96628	10nF 10% 16V 0402
2A35	2238 586 59812	100nF 20% 50V 0603
2A36	2022 552 05679	1µF 10% 16V 0805
2A39	2238 586 59812	100nF 20% 50V 0603
2A40	2238 586 59812	100nF 20% 50V 0603
2A42	2022 552 05679	1µF 10% 16V 0805
2A44	2238 586 59812	100nF 20% 50V 0603
2A45	4822 124 23002	10µF 16V
2A52	4822 124 23002	10µF 16V
2A53	2020 552 96628	10nF 10% 16V 0402
2A54	2020 552 96618	1nF 10% 50V 0402
2A55	2238 586 59812	100nF 20% 50V 0603
2A56	2022 552 05679	1µF 10% 16V 0805
2A57	2020 552 96628	10nF 10% 16V 0402
2A59	3198 032 55130	10µF 20% 20V
2A60	2020 552 96628	10nF 10% 16V 0402
2A61	2022 552 05679	1µF 10% 16V 0805
2A63	2238 586 59812	100nF 20% 50V 0603
2A65	2020 552 96628	10nF 10% 16V 0402
2A67	2022 552 05679	1µF 10% 16V 0805
2A68	2022 552 05679	1µF 10% 16V 0805
2A69	2238 586 59812	100nF 20% 50V 0603
2A70	2020 552 96628	10nF 10% 16V 0402
2A71	2020 552 96628	10nF 10% 16V 0402
2A74	2020 552 96628	10nF 10% 16V 0402
2A81	2022 552 05679	1µF 10% 16V 0805
2A82	2238 586 59812	100nF 20% 50V 0603
2A84	2022 552 05679	1µF 10% 16V 0805
2A85	4822 126 14324	33pF 5% 50V 0402

2A88	2238 586 59812	100nF 20% 50V 0603
2A89	2238 586 59812	100nF 20% 50V 0603
2A90	2022 552 05679	1µF 10% 16V 0805
2A91	4822 126 14324	33pF 5% 50V 0402
2A92	4822 126 14324	33pF 5% 50V 0402
2A93	2238 586 59812	100nF 20% 50V 0603
2A96	2022 552 05679	1µF 10% 16V 0805
2A97	2022 552 05679	1µF 10% 16V 0805
2A98	4822 126 14324	33pF 5% 50V 0402
2A99	4822 126 14324	33pF 5% 50V 0402
2B00	2238 586 59812	100nF 20% 50V 0603
2B01	2238 586 59812	100nF 20% 50V 0603
2B04	2238 586 59812	100nF 20% 50V 0603
2B05	2238 586 59812	100nF 20% 50V 0603
2B07	3198 034 01580	1.5pF 1% 50V 0402
2B08	2238 869 15109	10pF 5% 50V 0402
2B09	3198 034 01580	1.5pF 1% 50V 0402
2B10	2238 869 15109	10pF 5% 50V 0402
2B11	2020 552 96628	10nF 10% 16V 0402
2B14	3198 034 01580	1.5pF 1% 50V 0402
2B15	2238 869 15109	10pF 5% 50V 0402
2B16	3198 034 01580	1.5pF 1% 50V 0402
2B17	2238 869 15109	10pF 5% 50V 0402
2B20	3198 034 01580	1.5pF 1% 50V 0402
2B21	2020 552 96628	10nF 10% 16V 0402
2B22	2020 552 96628	10nF 10% 16V 0402
2B23	2020 552 96628	10nF 10% 16V 0402
2B24	2020 552 96628	10nF 10% 16V 0402
2B25	2020 552 96628	10nF 10% 16V 0402
2B26	2020 552 96628	10nF 10% 16V 0402
2B27	2020 552 96628	10nF 10% 16V 0402
2B28	2020 552 96628	10nF 10% 16V 0402
2B29	2020 552 96628	10nF 10% 16V 0402
2B30	2020 552 96628	10nF 10% 16V 0402
2B31	2020 552 96628	10nF 10% 16V 0402
2B32	2238 869 15109	10pF 5% 50V 0402
2B33	3198 034 01580	1.5pF 1% 50V 0402
2B34	2238 869 15109	10pF 5% 50V 0402
2B35	2020 552 96628	10nF 10% 16V 0402
2B36	2020 552 96628	10nF 10% 16V 0402
2B38	2022 552 05679	1µF 10% 16V 0805
2B39	2020 004 00003	330µF 20% 6.3V
2B39	2022 009 00703	330µF 20% 6.3V
2B40	2238 586 59812	100nF 20% 50V 0603
2B41	2238 586 59812	100nF 20% 50V 0603
2B42	2238 586 59812	100nF 20% 50V 0603
2B49	2238 586 59812	100nF 20% 50V 0603
2B51	2238 586 59812	100nF 20% 50V 0603
2B52	2238 586 59812	100nF 20% 50V 0603
2B53	2238 586 59812	100nF 20% 50V 0603
2B62	2238 586 59812	100nF 20% 50V 0603
2B64	2238 586 59812	100nF 20% 50V 0603
2B67	4822 124 81058	47µF 20% 4V
2B69	2238 586 59812	100nF 20% 50V 0603
2B77	2238 586 59812	100nF 20% 50V 0603
2B79	2238 586 59812	100nF 20% 50V 0603
2B80	2238 586 59812	100nF 20% 50V 0603
2B81	2238 586 59812	100nF 20% 50V 0603
2B89	5322 126 11583	10nF 10% 50V 0603
2B90	4822 124 81058	47µF 20% 4V
2B92	2238 586 59812	100nF 20% 50V 0603
2BA0	2020 552 96628	10nF 10% 16V 0402
2BA1	3198 035 14720	4.7nF 5% 25V 0402
2BA2	2020 552 96628	10nF 10% 16V 0402
2BA3	3198 035 14720	4.7nF 5% 25V 0402
2C01	2238 787 15641	22nF 5% 16V 0402
2C02	2238 787 15641	22nF 5% 16V 0402
2C03	2238 787 15641	22nF 5% 16V 0402
2C06	2238 787 15641	22nF 5% 16V 0402
2C07	2238 787 15641	22nF 5% 16V 0402
2C08	2238 787 15641	22nF 5% 16V 0402
2C09	2238 787 15641	22nF 5% 16V 0402
2C12	2238 787 15641	22nF 5% 16V 0402
2C13	2238 787 15641	22nF 5% 16V 0402
2C15	2238 787 15641	22nF 5% 16V 0402
2C16	2238 787 15641	22nF 5% 16V 0402
2C17	2238 787 15641	22nF 5% 16V 0402
2C18	2238 787 15641	22nF 5% 16V 0402
2C19	2238 787 15641	22nF 5% 16V 0402
2C20	2238 787 15641	22nF 5% 16V 0402
2C21	2020 004 90283	10µF 20% 10V 1206
2C22	2238 586 59812	100nF 20% 50V 0603
2C23	2238 787 15641	22nF 5% 16V 0402
2C25	2020 004 90283	10µF 20% 10V 1206
2C27	2238 586 59812	100nF 20% 50V 0603
2C28	2238 586 59812	100nF 20% 50V 0603
2C31	2238 586 59812	100nF 20% 50V 0603
2C32	4822 124 12108	100µF 20% 4V
2C35	2238 586 59812	100nF 20% 50V 0603
2C36	2022 552 05679	1µF 10% 16V 0805
2C39	2238 586 59812	100nF 20% 50V 0603
2C40	2238 586 59812	100nF 20% 50V 0603
2C41	2020 552 96618	1nF 10% 50V 0402
2C42	2022 552 05679	1µF 10% 16V 0805

2C44	2238 586 59812	100nF 20% 50V 0603	2D56	2222 580 15649	100nF 10% 50V 0805	2F3D	2238 586 59812	100nF 20% 50V 0603
2C45	4822 124 23002	10µF 16V	2D57	2020 552 96683	220nF 10% 50V	2F3E	2238 586 59812	100nF 20% 50V 0603
2C46	2022 552 05679	1µF 10% 16V 0805	2D58	2020 552 96683	220nF 10% 50V	2F3F	2022 552 05679	1µF 10% 16V 0805
2C47	2238 586 59812	100nF 20% 50V 0603	2D59	2238 586 59812	100nF 20% 50V 0603	2F3G	2020 552 00141	4.7µF 10% 6.3V 0805
2C48	2022 552 05679	1µF 10% 16V 0805	2D60	2238 586 59812	100nF 20% 50V 0603	2F3H	2020 552 96628	10nF 10% 16V 0402
2C49	2022 552 05679	1µF 10% 16V 0805	2D61	2020 552 96621	1.5nF 10% 50V 0402	2F3I	2020 552 96628	10nF 10% 16V 0402
2C52	4822 124 23002	10µF 16V	2D62	2238 916 15641	22nF 10% 25V 0603	2F3J	2020 552 96628	10nF 10% 16V 0402
2C53	2020 552 96628	10nF 10% 16V 0402	2D63	2238 916 15641	22nF 10% 25V 0603	2F3K	2020 552 96628	10nF 10% 16V 0402
2C55	2238 586 59812	100nF 20% 50V 0603	2D64	2020 552 96621	1.5nF 10% 50V 0402	2F3L	2020 552 96628	10nF 10% 16V 0402
2C56	2022 552 05679	1µF 10% 16V 0805	2D65	2020 552 96621	1.5nF 10% 50V 0402	2F3M	2020 552 96628	10nF 10% 16V 0402
2C57	2020 552 96628	10nF 10% 16V 0402	2D66	2020 552 96621	1.5nF 10% 50V 0402	2F3N	2020 552 96628	10nF 10% 16V 0402
2C59	4822 124 23002	10µF 16V	2D67	2020 552 96621	1.5nF 10% 50V 0402	2F3P	2020 552 96628	10nF 10% 16V 0402
2C60	2020 552 96628	10nF 10% 16V 0402	2D68	3198 034 04780	4.7pF 50V NP0 0402	2F3Q	2020 552 96628	10nF 10% 16V 0402
2C61	2020 552 96628	10nF 10% 16V 0402	2D69	2020 552 96621	1.5nF 10% 50V 0402	2F3R	2020 552 96628	10nF 10% 16V 0402
2C62	2020 552 96628	10nF 10% 16V 0402	2D70	2222 580 15649	100nF 10% 50V 0805	2F3S	2020 552 00141	4.7µF 10% 6.3V 0805
2C63	2238 586 59812	100nF 20% 50V 0603	2D71	2238 586 59812	100nF 20% 50V 0603	2F3T	2020 552 96628	10nF 10% 16V 0402
2C65	2020 552 96628	10nF 10% 16V 0402	2D72	2020 552 96828	470nF 20% 25V	2F42	2020 552 96628	10nF 10% 16V 0402
2C67	2022 552 05679	1µF 10% 16V 0805	2D75	2020 552 96828	470nF 20% 25V	2F46	2238 586 59812	100nF 20% 50V 0603
2C68	2022 552 05679	1µF 10% 16V 0805	2D77	2022 552 05679	1µF 10% 16V 0805	2F48	2020 552 00141	4.7µF 10% 6.3V 0805
2C69	2238 586 59812	100nF 20% 50V 0603	2D78	2022 552 05679	1µF 10% 16V 0805	2F49	2020 552 96628	10nF 10% 16V 0402
2C70	2020 552 96628	10nF 10% 16V 0402	2D79	2020 552 96618	1nF 10% 50V 0402	2F4A	2022 552 05679	1µF 10% 16V 0805
2C72	2020 552 96618	1nF 10% 50V 0402	2D80	2020 552 96618	1nF 10% 50V 0402	2F4B	2020 552 00141	4.7µF 10% 6.3V 0805
2C73	4822 124 23002	10µF 16V	2D81	2020 552 96618	1nF 10% 50V 0402	2F4C	2022 552 05679	1µF 10% 16V 0805
2C74	2020 552 96628	10nF 10% 16V 0402	2D82	2020 552 96618	1nF 10% 50V 0402	2F4D	2020 552 96628	10nF 10% 16V 0402
2C78	2022 552 05679	1µF 10% 16V 0805	2D83	2020 021 00213	220µF 25V 20%	2F4E	2238 586 59812	100nF 20% 50V 0603
2C79	2022 552 05679	1µF 10% 16V 0805	2D84	2020 021 00213	220µF 25V 20%	2F4F	2022 552 05679	1µF 10% 16V 0805
2C82	2020 552 96628	10nF 10% 16V 0402	2D91	2022 552 05679	1µF 10% 16V 0805	2F4G	2238 586 59812	100nF 20% 50V 0603
2C84	3198 035 02210	220pF 5% 50V 0402	2D92	2238 586 59812	100nF 20% 50V 0603	2F4J	2020 552 96628	10nF 10% 16V 0402
2C85	4822 126 14524	68pF 5% 50V 0402	2D93	2022 552 05679	1µF 10% 16V 0805	2F4K	2020 552 96628	10nF 10% 16V 0402
2C86	3198 034 03380	3.3pF 1% 50V 0402	2D94	3198 017 34730	47nF 16V 0603	2F4L	2020 552 96628	10nF 10% 16V 0402
2C99	2022 552 05679	1µF 10% 16V 0805	2D95	2238 869 15101	100pF 5% 50V 0402	2F4M	2020 552 96628	10nF 10% 16V 0402
2D00	2020 021 00213	220µF 25V 20%	2DA2	2238 586 59812	100nF 20% 50V 0603	2F4N	2020 552 96628	10nF 10% 16V 0402
2D01	2020 021 00213	220µF 25V 20%	2DA3	2238 586 59812	100nF 20% 50V 0603	2F4P	2020 552 96628	10nF 10% 16V 0402
2D02	2020 021 00213	220µF 25V 20%	2DD1	2020 021 00213	220µF 25V 20%	2F4Q	2020 552 96628	10nF 10% 16V 0402
2D03	2020 021 00213	220µF 25V 20%	2DD2	2020 021 00213	220µF 25V 20%	2F4T	2020 552 96628	10nF 10% 16V 0402
2D04	2020 552 96628	10nF 10% 16V 0402	2DF1	2020 552 96628	10nF 10% 16V 0402	2F4U	4822 124 81058	47µF 20% 4V
2D05	2020 552 96628	10nF 10% 16V 0402	2DG1	2238 586 59812	100nF 20% 50V 0603	2F54	4822 124 81058	47µF 20% 4V
2D06	3198 034 02280	2.2pF 1% 50V 0402	2DG2	2238 586 59812	100nF 20% 50V 0603	2F55	2020 552 00141	4.7µF 10% 6.3V 0805
2D06	3198 034 04780	4.7pF 50V NP0 0402	2DG3	2238 586 59812	100nF 20% 50V 0603	2F57	2020 552 96628	10nF 10% 16V 0402
2D07	3198 034 02280	2.2pF 1% 50V 0402	2DG4	2238 586 59812	100nF 20% 50V 0603	2F5D	3198 035 04710	470pF 50V 0402
2D07	3198 034 04780	4.7pF 50V NP0 0402	2DH1	2020 552 96618	1nF 10% 50V 0402	2F60	4822 124 81058	47µF 20% 4V
2D08	3198 034 04780	4.7pF 50V NP0 0402	2DH2	2020 552 96618	1nF 10% 50V 0402	2F61	2238 586 59812	100nF 20% 50V 0603
2D09	2238 869 15101	100pF 5% 50V 0402	2DH3	2238 586 59812	100nF 20% 50V 0603	2F62	2238 586 59812	100nF 20% 50V 0603
2D10	2022 552 05615	2.2µF 10% 6.3V 0805	2DH6	2020 552 96628	10nF 10% 16V 0402	2F63	2238 586 59812	100nF 20% 50V 0603
2D10	2250 200 13667	2.2µF 10% 6.3V 0805	2DH7	2020 552 96628	10nF 10% 16V 0402	2F64	2238 586 59812	100nF 20% 50V 0603
2D11	2020 552 96618	1nF 10% 50V 0402	2DH8	2020 552 96628	10nF 10% 16V 0402	2F65	2238 586 59812	100nF 20% 50V 0603
2D12	2238 869 15101	100pF 5% 50V 0402	2DH9	2238 869 15101	100pF 5% 50V 0402	2F66	2238 586 59812	100nF 20% 50V 0603
2D13	2020 552 96684	470nF 10% 25V 0805	2F00	2238 869 15109	10pF 5% 50V 0402	2F67	2238 586 59812	100nF 20% 50V 0603
2D13	2020 552 96828	470nF 20% 25V	2F01	2238 869 15109	10pF 5% 50V 0402	2F68	2238 586 59812	100nF 20% 50V 0603
2D15	2020 552 96684	470nF 10% 25V 0805	2F02	2238 869 15109	10pF 5% 50V 0402	2F69	2238 586 59812	100nF 20% 50V 0603
2D15	2020 552 96828	470nF 20% 25V	2F03	2238 869 15109	10pF 5% 50V 0402	2F72	2238 586 59812	100nF 20% 50V 0603
2D17	3198 034 02280	2.2pF 1% 50V 0402	2F04	2238 869 15109	10pF 5% 50V 0402	2F73	2238 586 59812	100nF 20% 50V 0603
2D17	3198 034 04780	4.7pF 50V NP0 0402	2F05	2238 869 15109	10pF 5% 50V 0402	2F74	2238 586 59812	100nF 20% 50V 0603
2D18	2238 586 59812	100nF 20% 50V 0603	2F06	2238 869 15109	10pF 5% 50V 0402	2F75	4822 124 81058	47µF 20% 4V
2D19	2222 580 15649	100nF 20% 50V 0805	2F07	2238 869 15109	10pF 5% 50V 0402	2F77	2238 586 59812	100nF 20% 50V 0603
2D20	2020 552 96684	470nF 10% 25V 0805	2F08	2238 869 15109	10pF 5% 50V 0402	2F78	2238 586 59812	100nF 20% 50V 0603
2D20	2020 552 96828	470nF 20% 25V	2F09	2238 869 15109	10pF 5% 50V 0402	2F79	2238 586 59812	100nF 20% 50V 0603
2D21	2020 552 96684	470nF 10% 25V 0805	2F0C	2238 869 15109	10pF 5% 50V 0402	2F80	2238 586 59812	100nF 20% 50V 0603
2D21	2020 552 96828	470nF 20% 25V	2F0D	2238 869 15109	10pF 5% 50V 0402	2F81	2238 586 59812	100nF 20% 50V 0603
2D22	2238 586 59812	100nF 20% 50V 0603	2F0E	2238 869 15109	10pF 5% 50V 0402	2F82	4822 124 81058	47µF 20% 4V
2D23	2238 586 59812	100nF 20% 50V 0603	2F0F	2238 869 15109	10pF 5% 50V 0402	2F83	2238 586 59812	100nF 20% 50V 0603
2D24	2020 552 96621	1.5nF 10% 50V 0402	2F0G	2238 869 15109	10pF 5% 50V 0402	2F84	2238 586 59812	100nF 20% 50V 0603
2D25	2020 552 96628	10nF 10% 16V 0402	2F0H	2238 869 15109	10pF 5% 50V 0402	2F85	2238 586 59812	100nF 20% 50V 0603
2D25	5322 126 11583	10nF 10% 50V 0603	2F0I	2238 869 15109	10pF 5% 50V 0402	2H01	2020 552 96618	1nF 10% 50V 0402
2D26	2020 552 96628	10nF 10% 16V 0402	2F0J	2238 869 15109	10pF 5% 50V 0402	2H02	2238 586 59812	100nF 20% 50V 0603
2D26	5322 126 11583	10nF 10% 50V 0603	2F0M	2238 869 15109	10pF 5% 50V 0402	2H03	2022 552 05679	1µF 10% 16V 0805
2D27	2020 552 96621	1.5nF 10% 50V 0402	2F0N	2238 869 15109	10pF 5% 50V 0402	2H05	2238 869 15101	100pF 5% 50V 0402
2D28	2020 552 96621	1.5nF 10% 50V 0402	2F0R	2238 586 59812	100nF 20% 50V 0603	2H06	2020 552 96618	1nF 10% 50V 0402
2D29	2020 552 96621	1.5nF 10% 50V 0402	2F0S	2238 586 59812	100nF 20% 50V 0603	2H07	2020 552 96618	1nF 10% 50V 0402
2D30	2020 552 96621	1.5nF 10% 50V 0402	2F0T	2022 552 05679	1µF 10% 16V 0805	2H08	3198 034 02790	47pF 1% 50V 0402
2D31	3198 034 02280	2.2pF 1% 50V 0402	2F1H	2022 552 05679	1µF 10% 16V 0805	2H09	3198 034 02790	47pF 1% 50V 0402
2D31	3198 034 04780	4.7pF 50V NP0 0402	2F2A	2238 586 59812	100nF 20% 50V 0603	2H12	3198 034 02790	47pF 1% 50V 0402
2D32	2020 552 96621	1.5nF 10% 50V 0402	2F2B	2022 552 05679	1µF 10% 16V 0805	2I01	2238 869 15101	100pF 5% 50V 0402
2D33	2222 580 15649	100nF 10% 50V 0805	2F2D	2238 586 59812	100nF 20% 50V 0603	2I02	2238 869 15101	100pF 5% 50V 0402
2D34	2238 586 59812	100nF 20% 50V 0603	2F2I	2238 586 59812	100nF 20% 50V 0603	2I03	2022 552 05679	1µF 10% 16V 0805
2D35	2020 552 96684	470nF 10% 25V 0805	2F2K	2238 869 15101	100pF 5% 50V 0402	2I04	2238 586 59812	100nF 20% 50V 0603
2D35	2020 552 96828	470nF 20% 25V	2F2L	2238 869 15101	100pF 5% 50V 0402	2I07	4822 124 12108	100µF 20% 4V
2D37	3198 034 04780	4.7pF 50V NP0 0402	2F2N	2022 552 05679	1µF 10% 16V 0805	2I08	2238 586 59812	100nF 20% 50V 0603
2D38	2020 552 96684	470nF 10% 25V 0805	2F2P	3198 035 04710	470pF 50V 0402	2I09	4822 124 23002	10µF 16V
2D38	2020 552 96828	470nF 20% 25V	2F2Q	3198 035 04710	470pF 50V 0402	2I10	4822 124 23002	10µF 16V
2D40	2022 552 05679	1µF 10% 16V 0805	2F2R					

2I56	5322 126 11578	1nF 10% 50V 0603	2LA5	3198 035 03320	3.3nF 5% 50V 0402	2M0H	2238 869 15101	100pF 5% 50V 0402
2I60	4822 124 12095	100µF 20% 16V	2LA6	3198 035 03320	3.3nF 5% 50V 0402	2M0I	2020 552 96628	10nF 10% 16V 0402
2I61	4822 124 12095	100µF 20% 16V	2LA7	3198 035 03320	3.3nF 5% 50V 0402	2M0J	2238 869 15101	100pF 5% 50V 0402
2I62	4822 124 80151	47µF 16V	2LA8	3198 035 03320	3.3nF 5% 50V 0402	2M10	2238 869 15101	100pF 5% 50V 0402
2I80	4822 124 12095	100µF 20% 16V	2LA9	3198 035 03320	3.3nF 5% 50V 0402	2M11	2238 787 15641	22nF 5% 16V 0402
2I81	4822 124 12095	100µF 20% 16V	2LB0	2238 586 59812	100nF 20% 50V 0603	2M12	2238 869 15101	100pF 5% 50V 0402
2I83	4822 124 80151	47µF 16V	2LB1	2238 586 59812	100nF 20% 50V 0603	2M14	2022 031 00373	470µF 20% 16V
2I90	2022 552 05679	1µF 10% 16V 0805	2LB3	2020 552 96618	1nF 10% 50V 0402	2M16	2238 869 15101	100pF 5% 50V 0402
2J01	2238 586 59812	100nF 20% 50V 0603	2LB4	2238 586 59812	100nF 20% 50V 0603	2M17	2238 869 15101	100pF 5% 50V 0402
2J03	2238 586 59812	100nF 20% 50V 0603	2LC0	4822 124 12108	100µF 20% 4V	2M1B	2020 552 94427	100pF 5% 50V
2J05	2238 586 59812	100nF 20% 50V 0603	2LC1	2022 552 05679	1µF 10% 16V 0805	2M1C	2020 552 94427	100pF 5% 50V
2J06	2238 586 59812	100nF 20% 50V 0603	2LC2	4822 124 12108	100µF 20% 4V	2M1D	2020 552 94427	100pF 5% 50V
2J08	2238 586 59812	100nF 20% 50V 0603	2LC3	2022 552 05679	1µF 10% 16V 0805	2M1E	2020 552 94427	100pF 5% 50V
2J10	2238 586 59812	100nF 20% 50V 0603	2LC4	2238 787 15641	22nF 5% 16V 0402	2M1F	2020 552 94427	100pF 5% 50V
2J13	2238 586 59812	100nF 20% 50V 0603	2LC5	2238 787 15641	22nF 5% 16V 0402	2M1G	2020 552 94427	100pF 5% 50V
2J16	2238 586 59812	100nF 20% 50V 0603	2LC6	2238 787 15641	22nF 5% 16V 0402	2M1H	2020 552 94427	100pF 5% 50V
2J18	2238 586 59812	100nF 20% 50V 0603	2LC7	2238 787 15641	22nF 5% 16V 0402	2M1I	2020 552 94427	100pF 5% 50V
2J20	2238 586 59812	100nF 20% 50V 0603	2LC8	2020 552 96628	10nF 10% 16V 0402	2M1J	2020 552 94427	100pF 5% 50V
2J22	3198 035 03320	3.3nF 5% 50V 0402	2LC9	2238 869 15101	100pF 5% 50V 0402	2M1K	2020 552 94427	100pF 5% 50V
2J23	3198 035 03320	3.3nF 5% 50V 0402	2LD0	2020 552 96628	10nF 10% 16V 0402	2M1N	2020 552 94427	100pF 5% 50V
2J24	3198 035 03320	3.3nF 5% 50V 0402	2LD1	2020 552 96618	1nF 10% 50V 0402	2M1Q	2020 552 94427	100pF 5% 50V
2J25	3198 035 03320	3.3nF 5% 50V 0402	2LD2	2022 552 05679	1µF 10% 16V 0805	2M1R	2238 586 59812	100nF 20% 50V 0603
2K38	2022 552 05679	1µF 10% 16V 0805	2LD3	2238 586 59812	100nF 20% 50V 0603	2M1S	4822 124 11131	47µF 6.3V
2K39	2022 552 05679	1µF 10% 16V 0805	2LD4	4822 124 12108	100µF 20% 4V	2M1T	4822 124 11131	47µF 6.3V
2K40	2238 586 59812	100nF 20% 50V 0603	2LD5	2020 552 96618	1nF 10% 50V 0402	2M40	2238 586 59812	100nF 20% 50V 0603
2K41	2238 586 59812	100nF 20% 50V 0603	2LD6	2020 552 96618	1nF 10% 50V 0402	2M41	2238 586 59812	100nF 20% 50V 0603
2K42	3198 032 47170	47µF 20% 16V	2LD7	2020 552 96618	1nF 10% 50V 0402	2M42	2238 586 59812	100nF 20% 50V 0603
2K43	2238 586 59812	100nF 20% 50V 0603	2LD8	2020 552 96618	1nF 10% 50V 0402	2M43	2238 586 59812	100nF 20% 50V 0603
2K45	2238 586 59812	100nF 20% 50V 0603	2LD9	2020 552 96618	1nF 10% 50V 0402	2M44	2238 869 15101	100pF 5% 50V 0402
2K58	2022 552 05679	1µF 10% 16V 0805	2LE0	2020 552 96618	1nF 10% 50V 0402	2M45	2238 869 15101	100pF 5% 50V 0402
2K60	2022 552 05679	1µF 10% 16V 0805	2LE1	2022 552 05679	1µF 10% 16V 0805	2M46	2238 869 15101	100pF 5% 50V 0402
2K61	2022 552 05679	1µF 10% 16V 0805	2LE1	2222 780 15663	1µF 10% 0805	2M47	2238 869 15101	100pF 5% 50V 0402
2K63	2022 552 05679	1µF 10% 16V 0805	2LE2	2022 552 05679	1µF 10% 16V 0805	2M48	2238 869 15101	100pF 5% 50V 0402
2K67	2022 552 05679	1µF 10% 16V 0805	2LE2	2222 780 15663	1µF 10% 0805	2M49	2238 869 15101	100pF 5% 50V 0402
2K68	2022 552 05679	1µF 10% 16V 0805	2LE3	2020 552 96618	1nF 10% 50V 0402	2M4A	2022 552 05679	1µF 10% 16V 0805
2K69	2022 552 05679	1µF 10% 16V 0805	2LE4	2238 586 59812	100nF 20% 50V 0603	2M4B	2022 552 05679	1µF 10% 16V 0805
2K70	2022 552 05679	1µF 10% 16V 0805	2LE7	2238 787 15641	22nF 5% 16V 0402	2M4K	2238 586 59812	100nF 20% 50V 0603
2K71	2022 552 05679	1µF 10% 16V 0805	2LF0	2020 552 96618	1nF 10% 50V 0402	2M4L	2022 552 05679	1µF 10% 16V 0805
2K72	2022 552 05679	1µF 10% 16V 0805	2LF1	2238 787 15641	22nF 5% 16V 0402	2M51	2238 869 15101	100pF 5% 50V 0402
2K73	2022 552 05679	1µF 10% 16V 0805	2LF2	2020 552 96618	1nF 10% 50V 0402	2M52	2238 869 15101	100pF 5% 50V 0402
2K74	2022 552 05679	1µF 10% 16V 0805	2LF3	2020 552 96618	1nF 10% 50V 0402	2M53	2238 869 15101	100pF 5% 50V 0402
2K75	2022 552 05679	1µF 10% 16V 0805	2LF4	2238 787 15641	22nF 5% 16V 0402	2M54	2238 869 15101	100pF 5% 50V 0402
2K76	2022 552 05679	1µF 10% 16V 0805	2LF5	2020 552 96618	1nF 10% 50V 0402	2M55	2238 869 15101	100pF 5% 50V 0402
2K77	2022 552 05679	1µF 10% 16V 0805	2LF6	2020 552 96618	1nF 10% 50V 0402	2M56	2238 869 15101	100pF 5% 50V 0402
2L02	2238 586 59812	100nF 20% 50V 0603	2LF7	2020 552 96618	1nF 10% 50V 0402	2M57	2238 869 15101	100pF 5% 50V 0402
2L03	2238 586 59812	100nF 20% 50V 0603	2LF8	2022 552 05679	1µF 10% 16V 0805	2M58	2238 869 15101	100pF 5% 50V 0402
2L04	2020 552 96618	1nF 10% 50V 0402	2LF8	2222 780 15663	1µF 10% 0805	2M59	2238 869 15101	100pF 5% 50V 0402
2L06	2238 787 15641	22nF 5% 16V 0402	2LF9	2022 552 05679	1µF 10% 16V 0805	2M5A	2238 869 15101	100pF 5% 50V 0402
2L07	2238 586 59812	100nF 20% 50V 0603	2LF9	2222 780 15663	1µF 10% 0805	2M5B	2238 869 15101	100pF 5% 50V 0402
2L08	2238 869 15101	100pF 5% 50V 0402	2LG0	2020 552 96618	1nF 10% 50V 0402	2M5C	2238 869 15101	100pF 5% 50V 0402
2L09	2238 586 59812	100nF 20% 50V 0603	2LG1	2238 586 59812	100nF 20% 50V 0603	2M5D	2238 869 15101	100pF 5% 50V 0402
2L10	2020 552 96618	1nF 10% 50V 0402	2LG3	2020 552 96618	1nF 10% 50V 0402	2M5E	2238 869 15101	100pF 5% 50V 0402
2L11	2238 869 15101	100pF 5% 50V 0402	2LG4	2020 552 96618	1nF 10% 50V 0402	2M5H	4822 126 14519	22pF 5% 50V 0402
2L12	2238 869 15101	100pF 5% 50V 0402	2LG5	2020 552 96618	1nF 10% 50V 0402	2M5I	2238 869 15101	100pF 5% 50V 0402
2L13	2238 787 15641	22nF 5% 16V 0402	2LG6	2020 552 96618	1nF 10% 50V 0402	2M5J	2238 869 15101	100pF 5% 50V 0402
2L14	2238 869 15101	100pF 5% 50V 0402	2LH0	2238 869 15101	100pF 5% 50V 0402	2M5K	2238 869 15101	100pF 5% 50V 0402
2L15	2238 787 15641	22nF 5% 16V 0402	2LH1	2020 552 96628	10nF 10% 16V 0402	2M5L	2238 869 15101	100pF 5% 50V 0402
2L16	2238 787 15641	22nF 5% 16V 0402	2LH2	2020 552 96618	1nF 10% 50V 0402	2M5N	2238 869 15101	100pF 5% 50V 0402
2L17	2238 586 59812	100nF 20% 50V 0603	2LH3	2020 552 96618	1nF 10% 50V 0402	2M5P	2238 869 15101	100pF 5% 50V 0402
2L18	2238 787 15641	22nF 5% 16V 0402	2LH4	2020 552 96618	1nF 10% 50V 0402	2M5Q	2238 869 15101	100pF 5% 50V 0402
2L19	2020 552 96807	1µF 10% 10V 0603	2LH5	2020 552 96618	1nF 10% 50V 0402	2M5R	2238 869 15101	100pF 5% 50V 0402
2L20	2020 552 96807	1µF 10% 10V 0603	2LH6	2020 552 96628	10nF 10% 16V 0402	2M5S	2238 869 15101	100pF 5% 50V 0402
2L21	2020 552 96807	1µF 10% 10V 0603	2LH7	2238 586 59812	100nF 20% 50V 0603	2M5T	2238 869 15101	100pF 5% 50V 0402
2L22	2020 552 96807	1µF 10% 10V 0603	2LH8	2020 552 96628	10nF 10% 16V 0402	2M5U	2238 869 15101	100pF 5% 50V 0402
2L23	2238 787 15641	22nF 5% 16V 0402	2LJ1	2238 586 59812	100nF 20% 50V 0603	2M5V	2238 869 15101	100pF 5% 50V 0402
2L50	2238 586 59812	100nF 20% 50V 0603	2LN3	2238 586 59812	100nF 20% 50V 0603	2M6B	2022 552 05679	1µF 10% 16V 0805
2L51	2238 586 59812	100nF 20% 50V 0603	2LN4	2238 586 59812	100nF 20% 50V 0603	2M6C	2022 552 05679	1µF 10% 16V 0805
2L52	2238 586 59812	100nF 20% 50V 0603	2LN5	2238 586 59812	100nF 20% 50V 0603	2M6D	2238 586 59812	100nF 20% 50V 0603
2L53	2238 586 59812	100nF 20% 50V 0603	2LN6	2238 586 59812	100nF 20% 50V 0603	2M80	2238 586 59812	100nF 20% 50V 0603
2L54	2238 586 59812	100nF 20% 50V 0603	2LN7	2238 586 59812	100nF 20% 50V 0603	2M81	2020 552 96628	10nF 10% 16V 0402
2L55	2238 586 59812	100nF 20% 50V 0603	2LN8	2238 586 59812	100nF 20% 50V 0603	2M82	2020 552 96628	10nF 10% 16V 0402
2L56	2238 586 59812	100nF 20% 50V 0603	2LP2	2238 586 59812	100nF 20% 50V 0603	2M84	2020 004 90283	10µF 20% 10V 1206
2L57	2238 586 59812	100nF 20% 50V 0603	2LP3	2238 586 59812	100nF 20% 50V 0603	2M85	2020 004 90283	10µF 20% 10V 1206
2L58	2238 586 59812	100nF 20% 50V 0603	2LS5	2238 586 59812	100nF 20% 50V 0603	2N00	4822 126 14324	33pF 5% 50V 0402
2L59	2238 586 59812	100nF 20% 50V 0603	2LT0	2022 552 05679	1µF 10% 16V 0805	2N01	4822 126 14324	33pF 5% 50V 0402
2L60	2022 552 05679	1µF 10% 16V 0805	2LT1	2238 586 59812	100nF 20% 50V 0603	2N02	2238 586 59812	100nF 20% 50V 0603
2L61	2020 552 96618	1nF 10% 50V 0402	2LT2	2238 586 59812	100nF 20% 50V 0603	2N03	2238 586 59812	100nF 20% 50V 0603
2L62	2020 552 96618	1nF 10% 50V 0402	2LT3	2238 586 59812	100nF 20% 50V 0603	2N04	2238 586 59812	100nF 20% 50V 0603
2L63	2238 869 15101	100pF 5% 50V 0402	2LT4	2238 586 59812	100nF 20% 50V 0603	2N05	2238 586 59812	100nF 20% 50V 0603
2L64	2022 552 05679	1µF 10% 16V 0805	2LT5	2238 586 59812	100nF 20% 50V 0603	2N06	2238 586 59812	100nF 20% 50V 0603
2L65	2022 552 05679	1µF 10% 16V 0805	2LT6					

2O03	4822 124 23002	10µF 16V	2Q40	2250 200 13672	4.7µF 10% 6.3V 0805	2R54	2020 552 96618	1nF 10% 50V 0402
2O04	2020 552 96618	1nF 10% 50V 0402	2Q41	2020 552 96628	10nF 10% 16V 0402	2R55	2020 552 96618	1nF 10% 50V 0402
2O05	2020 552 96618	1nF 10% 50V 0402	2Q42	2250 200 13672	4.7µF 10% 6.3V 0805	2R56	2020 552 96618	1nF 10% 50V 0402
2O06	2020 552 96618	1nF 10% 50V 0402	2Q43	2022 552 05679	1µF 10% 16V 0805	2R57	2020 552 96618	1nF 10% 50V 0402
2O07	2020 552 96618	1nF 10% 50V 0402	2Q44	2238 586 59812	100nF 20% 50V 0603	2R58	2238 787 15641	22nF 5% 16V 0402
2O10	2022 552 05679	1µF 10% 16V 0805	2Q45	2238 586 59812	100nF 20% 50V 0603	2R59	2238 787 15641	22nF 5% 16V 0402
2O11	2238 586 59812	100nF 20% 50V 0603	2Q46	2238 586 59812	100nF 20% 50V 0603	2R60	2020 552 96618	1nF 10% 50V 0402
2O12	2020 552 00141	4.7µF 10% 6.3V 0805	2Q47	2238 586 59812	100nF 20% 50V 0603	2R61	2022 552 05679	1µF 10% 16V 0805
2O13	2238 586 59812	100nF 20% 50V 0603	2Q48	2238 586 59812	100nF 20% 50V 0603	2R61	2222 780 15663	1µF 10% 0805
2O14	2238 586 59812	100nF 20% 50V 0603	2Q49	2238 586 59812	100nF 20% 50V 0603	2R62	2020 552 96618	1nF 10% 50V 0402
2O15	2238 586 59812	100nF 20% 50V 0603	2Q50	2238 586 59812	100nF 20% 50V 0603	2R63	2020 552 96618	1nF 10% 50V 0402
2O16	2238 586 59812	100nF 20% 50V 0603	2Q51	2238 586 59812	100nF 20% 50V 0603	2R64	2238 787 15641	22nF 5% 16V 0402
2O17	2020 552 00141	4.7µF 10% 6.3V 0805	2Q52	2238 586 59812	100nF 20% 50V 0603	2R65	2020 552 96618	1nF 10% 50V 0402
2O18	2238 586 59812	100nF 20% 50V 0603	2Q53	2238 586 59812	100nF 20% 50V 0603	2R66	2020 552 96618	1nF 10% 50V 0402
2O19	2238 586 59812	100nF 20% 50V 0603	2Q54	2238 586 59812	100nF 20% 50V 0603	2R67	2238 586 59812	100nF 20% 50V 0603
2O20	2238 586 59812	100nF 20% 50V 0603	2Q55	2238 586 59812	100nF 20% 50V 0603	2R68	2238 787 15641	22nF 5% 16V 0402
2O21	2238 586 59812	100nF 20% 50V 0603	2Q56	2020 552 96628	10nF 10% 16V 0402	2R69	2238 787 15641	22nF 5% 16V 0402
2O22	2238 586 59812	100nF 20% 50V 0603	2Q57	2020 552 96628	10nF 10% 16V 0402	2R70	2238 787 15641	22nF 5% 16V 0402
2O23	2238 586 59812	100nF 20% 50V 0603	2Q58	2020 552 96628	10nF 10% 16V 0402	2R71	2020 552 96618	1nF 10% 50V 0402
2O24	2238 586 59812	100nF 20% 50V 0603	2Q59	2020 552 96628	10nF 10% 16V 0402	2R72	2020 552 96618	1nF 10% 50V 0402
2O25	2238 586 59812	100nF 20% 50V 0603	2Q60	2238 586 59812	100nF 20% 50V 0603	2R73	2020 552 96618	1nF 10% 50V 0402
2O26	2238 586 59812	100nF 20% 50V 0603	2Q61	2020 552 96618	1nF 10% 50V 0402	2R74	2238 787 15641	22nF 5% 16V 0402
2O27	2238 586 59812	100nF 20% 50V 0603	2Q62	2238 869 15101	100pF 5% 50V 0402	2R75	4822 124 81058	47µF 20% 4V
2O28	2238 586 59812	100nF 20% 50V 0603	2Q63	2238 586 59812	100nF 20% 50V 0603	2R76	2238 787 15641	22nF 5% 16V 0402
2P02	2238 586 59812	100nF 20% 50V 0603	2Q64	2238 586 59812	100nF 20% 50V 0603	2R77	2022 552 05679	1µF 10% 16V 0805
2P03	2238 586 59812	100nF 20% 50V 0603	2Q65	2238 586 59812	100nF 20% 50V 0603	2R78	2238 787 15641	22nF 5% 16V 0402
2P04	2238 586 59812	100nF 20% 50V 0603	2Q66	2238 586 59812	100nF 20% 50V 0603	2R79	2238 787 15641	22nF 5% 16V 0402
2P06	2238 586 59812	100nF 20% 50V 0603	2Q67	2250 200 13672	4.7µF 10% 6.3V 0805	2R80	2238 586 59812	100nF 20% 50V 0603
2P07	2238 586 59812	100nF 20% 50V 0603	2Q68	2250 200 13672	4.7µF 10% 6.3V 0805	2R81	2022 552 05679	1µF 10% 16V 0805
2P09	2020 552 96618	1nF 10% 50V 0402	2Q69	2250 200 13672	4.7µF 10% 6.3V 0805	2R81	2222 780 15663	1µF 10% 0805
2P10	2238 586 59812	100nF 20% 50V 0603	2Q70	2250 200 13672	4.7µF 10% 6.3V 0805	2R82	2238 787 15641	22nF 5% 16V 0402
2P15	2238 586 59812	100nF 20% 50V 0603	2Q71	2250 200 13672	4.7µF 10% 6.3V 0805	2R83	2020 552 96618	1nF 10% 50V 0402
2P16	2238 586 59812	100nF 20% 50V 0603	2Q72	2250 200 13672	4.7µF 10% 6.3V 0805	2R84	2238 787 15641	22nF 5% 16V 0402
2P18	2238 586 59812	100nF 20% 50V 0603	2Q73	2020 552 96628	10nF 10% 16V 0402	2R86	2238 787 15641	22nF 5% 16V 0402
2P19	2238 586 59812	100nF 20% 50V 0603	2Q74	2020 552 96628	10nF 10% 16V 0402	2R87	2238 787 15641	22nF 5% 16V 0402
2P20	2238 586 59812	100nF 20% 50V 0603	2Q75	2020 552 96628	10nF 10% 16V 0402	2R88	2238 787 15641	22nF 5% 16V 0402
2P22	2238 586 59812	100nF 20% 50V 0603	2Q76	2020 552 96628	10nF 10% 16V 0402	2R89	2020 552 96618	1nF 10% 50V 0402
2P23	2238 586 59812	100nF 20% 50V 0603	2Q77	2020 552 96628	10nF 10% 16V 0402	2R90	2238 787 15641	22nF 5% 16V 0402
2P24	2020 552 96628	10nF 10% 16V 0402	2Q78	2020 552 96628	10nF 10% 16V 0402	2R91	2020 552 96618	1nF 10% 50V 0402
2P25	2020 552 96628	10nF 10% 16V 0402	2Q79	2020 552 96628	10nF 10% 16V 0402	2R92	2238 787 15641	22nF 5% 16V 0402
2P31	2238 586 59812	100nF 20% 50V 0603	2Q80	2020 552 96628	10nF 10% 16V 0402	2R93	2020 552 96618	1nF 10% 50V 0402
2P32	2238 586 59812	100nF 20% 50V 0603	2Q82	2020 021 00215	220µF 20% 25V	2R94	2238 586 59812	100nF 20% 50V 0603
2P33	2238 586 59812	100nF 20% 50V 0603	2Q83	2020 021 00215	220µF 20% 25V	2R95	2238 787 15641	22nF 5% 16V 0402
2P35	2238 586 59812	100nF 20% 50V 0603	2R00	2238 586 59812	100nF 20% 50V 0603	2R96	2238 586 59812	100nF 20% 50V 0603
2P40	2238 586 59812	100nF 20% 50V 0603	2R01	2238 787 15641	22nF 5% 16V 0402	2R97	2238 787 15641	22nF 5% 16V 0402
2P41	2238 586 59812	100nF 20% 50V 0603	2R02	2238 787 15641	22nF 5% 16V 0402	2R98	2238 787 15641	22nF 5% 16V 0402
2P44	2020 004 90283	10µF 20% 10V 1206	2R03	2238 787 15641	22nF 5% 16V 0402	2R99	2238 586 59812	100nF 20% 50V 0603
2P76	2238 586 59812	100nF 20% 50V 0603	2R04	2238 586 59812	100nF 20% 50V 0603	2RA1	2020 552 96618	1nF 10% 50V 0402
2P77	2238 586 59812	100nF 20% 50V 0603	2R05	2238 787 15641	22nF 5% 16V 0402	2RA2	2020 021 00213	220µF 25V 20%
2P80	2238 586 59812	100nF 20% 50V 0603	2R06	2238 586 59812	100nF 20% 50V 0603	2RA3	2020 552 96618	1nF 10% 50V 0402
2P81	2238 586 59812	100nF 20% 50V 0603	2R07	2238 787 15641	22nF 5% 16V 0402	2RA4	2020 552 96618	1nF 10% 50V 0402
2P82	2238 586 59812	100nF 20% 50V 0603	2R08	2238 586 59812	100nF 20% 50V 0603	2RA5	2020 552 96618	1nF 10% 50V 0402
2Q00	2250 200 13672	4.7µF 10% 6.3V 0805	2R09	2238 787 15641	22nF 5% 16V 0402	2RA6	2022 552 05679	1µF 10% 16V 0805
2Q01	2022 552 05679	1µF 10% 16V 0805	2R10	2020 552 96618	1nF 10% 50V 0402	2RA6	2222 780 15663	1µF 10% 0805
2Q01	2222 780 15663	1µF 10% 0805	2R11	2022 552 05679	1µF 10% 16V 0805	2RA7	2022 552 05679	1µF 10% 16V 0805
2Q02	2250 200 13672	4.7µF 10% 6.3V 0805	2R11	2222 780 15663	1µF 10% 0805	2RA7	2222 780 15663	1µF 10% 0805
2Q03	2022 552 05679	1µF 10% 16V 0805	2R12	2022 552 05679	1µF 10% 16V 0805	2RA8	2020 552 96637	10µF 10% 6.3V 0805
2Q03	2222 780 15663	1µF 10% 0805	2R12	2222 780 15663	1µF 10% 0805	2RA9	2020 552 96618	1nF 10% 50V 0402
2Q04	2238 586 59812	100nF 20% 50V 0603	2R13	2020 552 96618	1nF 10% 50V 0402	2RB2	2022 552 05679	1µF 10% 16V 0805
2Q05	2238 586 59812	100nF 20% 50V 0603	2R14	2238 787 15641	22nF 5% 16V 0402	2RB2	2222 780 15663	1µF 10% 0805
2Q06	2238 586 59812	100nF 20% 50V 0603	2R15	2020 552 96637	10µF 10% 6.3V 0805	2RB3	2020 552 96618	1nF 10% 50V 0402
2Q07	2238 586 59812	100nF 20% 50V 0603	2R16	2022 552 05679	1µF 10% 16V 0805	2RB5	2022 552 05679	1µF 10% 16V 0805
2Q08	2238 586 59812	100nF 20% 50V 0603	2R16	2222 780 15663	1µF 10% 0805	2RB5	2222 780 15663	1µF 10% 0805
2Q09	2238 586 59812	100nF 20% 50V 0603	2R17	2238 586 59812	100nF 20% 50V 0603	2RB6	2022 552 05679	1µF 10% 16V 0805
2Q10	2238 586 59812	100nF 20% 50V 0603	2R18	2020 552 96618	1nF 10% 50V 0402	2RB6	2222 780 15663	1µF 10% 0805
2Q11	2238 586 59812	100nF 20% 50V 0603	2R19	2238 586 59812	100nF 20% 50V 0603	2RC5	2020 552 96618	1nF 10% 50V 0402
2Q12	2238 586 59812	100nF 20% 50V 0603	2R20	2020 552 96618	1nF 10% 50V 0402	2RC6	2020 021 00213	220µF 25V 20%
2Q13	2238 586 59812	100nF 20% 50V 0603	2R21	2020 552 96618	1nF 10% 50V 0402	2RC7	2238 586 59812	100nF 20% 50V 0603
2Q14	2238 586 59812	100nF 20% 50V 0603	2R23	2020 552 96618	1nF 10% 50V 0402	2RC8	2020 552 96637	10µF 10% 6.3V 0805
2Q15	2238 586 59812	100nF 20% 50V 0603	2R25	2238 787 15641	22nF 5% 16V 0402	2T01	2020 552 96683	220nF 10% 50V
2Q16	2020 552 96628	10nF 10% 16V 0402	2R26	2238 586 59812	100nF 20% 50V 0603	2T02	2020 004 90283	10µF 20% 10V 1206
2Q17	2020 552 96628	10nF 10% 16V 0402	2R28	2020 552 96618	1nF 10% 50V 0402	2T03	4822 126 13879	220nF +80-20% 16V
2Q18	2020 552 96628	10nF 10% 16V 0402	2R29	2238 787 15641	22nF 5% 16V 0402	2T04	2238 586 59812	100nF 20% 50V 0603
2Q19	2020 552 96628	10nF 10% 16V 0402	2R30	2020 552 96618	1nF 10% 50V 0402	2T05	2020 552 96628	10nF 10% 16V 0402
2Q20	2250 200 13672	4.7µF 10% 6.3V 0805	2R31	2238 787 15641	22nF 5% 16V 0402	2T08	2020 552 96683	220nF 10% 50V
2Q21	2020 552 96628	10nF 10% 16V 0402	2R32	2238 586 59812	100nF 20% 50V 0603	2T09	2238 586 59812	100nF 20% 50V 0603
2Q22	2250 200 13672	4.7µF 10% 6.3V 0805	2R33	2238 787 15641	22nF 5% 16V 0402	2T10	3198 034 04790	27pF 1% 50V 0402
2Q23	2020 552 96628	10nF 10% 16V 0402	2R34	4822 124 81058	47µF 20% 4V	2T12	2020 552 96628	10nF 10% 16V 0402
2Q24	2238 586 59812	100nF 20% 50V 0603	2R35	2238 787 15641	22nF 5% 16V 0402	2T13	3198 034 04790	27pF 1% 50V 0402
2Q25	3198 034 01290	12pF 1% 50V 0402	2R36	2020 552 96618	1nF 10% 50V 0402	2T14	2020 004 90283	10µF 20% 10

2U03	2022 552 05679	1µF 10% 16V 0805	2V12	2022 552 05679	1µF 10% 16V 0805	2Z24	4822 051 30331	330Ω 5% 0.062W
2U04	2238 586 59812	100nF 20% 50V 0603	2V12	2222 780 15663	1µF 10% 0805	2Z25	4822 051 30331	330Ω 5% 0.062W
2U05	2020 552 96618	1nF 10% 50V 0402	2V13	2022 552 05679	1µF 10% 16V 0805	2Z26	4822 051 30331	330Ω 5% 0.062W
2U06	2238 586 59812	100nF 20% 50V 0603	2V13	2222 780 15663	1µF 10% 0805	2Z27	4822 051 30331	330Ω 5% 0.062W
2U07	2238 586 59812	100nF 20% 50V 0603	2V14	2020 021 00215	220µF 20% 25V	2Z28	4822 051 30331	330Ω 5% 0.062W
2U08	2238 586 59812	100nF 20% 50V 0603	2V16	2238 586 59812	100nF 20% 50V 0603	2Z50	4822 051 30331	330Ω 5% 0.062W
2U09	2022 552 05635	22µF 10% 16V	2V17	2238 586 59812	100nF 20% 50V 0603	2Z51	2238 586 59812	100nF 20% 50V 0603
2U0A	2022 552 05635	22µF 10% 16V	2V18	2238 586 59812	100nF 20% 50V 0603	2Z52	2238 586 59812	100nF 20% 50V 0603
2U0B	2020 552 96618	1nF 10% 50V 0402	2V19	2238 586 59812	100nF 20% 50V 0603			
2U0C	2238 586 59812	100nF 20% 50V 0603	2V20	2238 586 59812	100nF 20% 50V 0603			
2U0D	2020 552 96628	10nF 10% 16V 0402	2V21	2238 586 59812	100nF 20% 50V 0603			
2U0E	2022 552 05679	1µF 10% 16V 0805	2V22	2238 586 59812	100nF 20% 50V 0603			
2U0F	2238 586 59812	100nF 20% 50V 0603	2V23	2238 586 59812	100nF 20% 50V 0603			
2U0G	2020 552 96618	1nF 10% 50V 0402	2V24	2238 586 59812	100nF 20% 50V 0603			
2U0H	2238 586 59812	100nF 20% 50V 0603	2V25	2238 586 59812	100nF 20% 50V 0603			
2U0I	2238 586 59812	100nF 20% 50V 0603	2V26	2238 586 59812	100nF 20% 50V 0603			
2U0J	2238 586 59812	100nF 20% 50V 0603	2V27	2238 586 59812	100nF 20% 50V 0603			
2U0K	2022 552 05635	22µF 10% 16V	2V28	2238 586 59812	100nF 20% 50V 0603			
2U0L	2022 552 05635	22µF 10% 16V	2V29	2238 586 59812	100nF 20% 50V 0603			
2U0M	2020 552 96618	1nF 10% 50V 0402	2V30	2238 586 59812	100nF 20% 50V 0603			
2U0N	2238 586 59812	100nF 20% 50V 0603	2V31	2238 586 59812	100nF 20% 50V 0603			
2U0P	2020 552 96628	10nF 10% 16V 0402	2V32	2238 586 59812	100nF 20% 50V 0603			
2U0Q	2022 552 05679	1µF 10% 16V 0805	2V36	2020 552 96628	10nF 10% 16V 0402			
2U0R	2238 586 59812	100nF 20% 50V 0603	2V37	2020 552 96628	10nF 10% 16V 0402			
2U0S	2020 552 96618	1nF 10% 50V 0402	2V38	2020 552 96628	10nF 10% 16V 0402			
2U0T	2238 586 59812	100nF 20% 50V 0603	2V39	2238 869 15101	100pF 5% 50V 0402			
2U0U	2238 586 59812	100nF 20% 50V 0603	2V40	2238 869 15101	100pF 5% 50V 0402			
2U0V	2238 586 59812	100nF 20% 50V 0603	2V41	2238 869 15101	100pF 5% 50V 0402			
2U0W	2022 552 05635	22µF 10% 16V	2V42	2238 869 15101	100pF 5% 50V 0402			
2U0Y	2022 552 05635	22µF 10% 16V	2V43	2238 869 15101	100pF 5% 50V 0402			
2U0Z	3198 035 04710	470pF 50V 0402	2V44	2238 869 15101	100pF 5% 50V 0402			
2U10	3198 035 04710	470pF 50V 0402	2V45	2238 869 15101	100pF 5% 50V 0402			
2U11	3198 035 04710	470pF 50V 0402	2V46	2238 869 15101	100pF 5% 50V 0402			
2U12	2022 552 05635	22µF 10% 16V	2V47	2238 869 15101	100pF 5% 50V 0402			
2U13	2022 552 05635	22µF 10% 16V	2V48	2238 869 15101	100pF 5% 50V 0402			
2U14	2022 552 05635	22µF 10% 16V	2V49	2020 552 96628	10nF 10% 16V 0402			
2U15	2022 552 05679	1µF 10% 16V 0805	2V50	2020 552 96628	10nF 10% 16V 0402			
2U16	2022 552 05679	1µF 10% 16V 0805	2V51	2020 552 96628	10nF 10% 16V 0402			
2U17	2022 552 05679	1µF 10% 16V 0805	2V52	2238 869 15101	100pF 5% 50V 0402			
2U18	2022 552 05679	1µF 10% 16V 0805	2V53	2238 586 59812	100nF 20% 50V 0603			
2U19	2020 552 96628	10nF 10% 16V 0402	2V54	2022 552 05679	1µF 10% 16V 0805			
2U1A	2238 787 15641	22nF 5% 16V 0402	2V54	2222 780 15663	1µF 10% 0805			
2U1B	2020 552 96628	10nF 10% 16V 0402	2V55	2022 552 05679	1µF 10% 16V 0805			
2U1C	2238 787 15641	22nF 5% 16V 0402	2V55	2222 780 15663	1µF 10% 0805			
2U1D	2020 552 96628	10nF 10% 16V 0402	2V56	2238 869 15101	100pF 5% 50V 0402			
2U1E	2020 552 96623	2.2nF 10% 50V 0402	2W01	2238 586 59812	100nF 20% 50V 0603			
2U1F	5322 124 41945	22µF 20% 35V	2W04	2238 586 59812	100nF 20% 50V 0603			
2U1G	5322 124 41945	22µF 20% 35V	2W09	4822 124 11946	22µF 20% 16V			
2U1I	2020 552 96628	10nF 10% 16V 0402	2W14	2238 586 59812	100nF 20% 50V 0603			
2U1J	2020 552 96628	10nF 10% 16V 0402	2W15	4822 126 14472	1µF 10% 10V 0805			
2U1K	2020 552 96628	10nF 10% 16V 0402	2W16	4822 126 14472	1µF 10% 10V 0805			
2U1M	2020 552 96618	1nF 10% 50V 0402	2W18	3198 035 71040	100nF 10% 16V 0402			
2U1N	2020 552 96618	1nF 10% 50V 0402	2W53	2238 586 59812	100nF 20% 50V 0603			
2U1P	2020 552 96618	1nF 10% 50V 0402	2W54	2238 586 59812	100nF 20% 50V 0603			
2U1Q	2020 552 96618	1nF 10% 50V 0402	2W55	2238 586 59812	100nF 20% 50V 0603			
2U1R	2020 552 96618	1nF 10% 50V 0402	2W57	2238 586 59812	100nF 20% 50V 0603			
2U1S	2020 552 96618	1nF 10% 50V 0402	2W58	2238 586 59812	100nF 20% 50V 0603			
2U1T	2020 552 96618	1nF 10% 50V 0402	2W59	2238 586 59812	100nF 20% 50V 0603			
2U1U	2238 586 59812	100nF 20% 50V 0603	2W60	2238 586 59812	100nF 20% 50V 0603			
2U1W	2020 552 96623	2.2nF 10% 50V 0402	2W63	2238 586 59812	100nF 20% 50V 0603			
2U1Y	2020 552 96623	2.2nF 10% 50V 0402	2W64	2238 586 59812	100nF 20% 50V 0603			
2U1Z	2020 552 96623	2.2nF 10% 50V 0402	2W65	2238 586 59812	100nF 20% 50V 0603			
2U22	2020 552 96684	470nF 10% 25V 0805	2W66	2238 586 59812	100nF 20% 50V 0603			
2U24	2022 552 05679	1µF 10% 16V 0805	2W71	2238 586 59812	100nF 20% 50V 0603			
2U25	2238 787 15641	22nF 5% 16V 0402	2W72	2238 586 59812	100nF 20% 50V 0603			
2U29	2022 552 05679	1µF 10% 16V 0805	2W73	2238 586 59812	100nF 20% 50V 0603			
2U32	2020 021 00215	220µF 20% 25V	2W74	2238 586 59812	100nF 20% 50V 0603			
2U33	2020 021 00215	220µF 20% 25V	2W75	2238 586 59812	100nF 20% 50V 0603			
2U34	2022 552 05679	1µF 10% 16V 0805	2W76	2020 004 90283	10µF 20% 10V 1206			
2U35	2020 021 00215	220µF 20% 25V	2W78	2238 586 59812	100nF 20% 50V 0603			
2U36	2022 552 05679	1µF 10% 16V 0805	2W79	2020 552 96628	10nF 10% 16V 0402			
2U41	5322 124 41945	22µF 20% 35V	2W80	2020 552 96628	10nF 10% 16V 0402			
2U43	4822 126 14324	33pF 5% 50V 0402	2W81	2238 586 59812	100nF 20% 50V 0603			
2U44	3198 035 02210	220pF 5% 50V 0402	2W86	2238 586 59812	100nF 20% 50V 0603			
2U45	2022 552 05679	1µF 10% 16V 0805	2W91	2020 552 96628	10nF 10% 16V 0402			
2U46	2020 552 96683	220nF 10% 50V	2W92	2020 552 96628	10nF 10% 16V 0402			
2V00	2020 552 96618	1nF 10% 50V 0402	2W93	2238 586 59812	100nF 20% 50V 0603			
2V01	2020 552 96618	1nF 10% 50V 0402	2Y38	2022 552 05679	1µF 10% 16V 0805			
2V02	2020 552 96618	1nF 10% 50V 0402	2Y39	2022 552 05679	1µF 10% 16V 0805			
2V03	2238 586 59812	100nF 20% 50V 0603	2Y40	2238 586 59812	100nF 20% 50V 0603			
2V04	2020 552 96618	1nF 10% 50V 0402	2Y41	2238 586 59812	100nF 20% 50V 0603			
2V05	2238 869 15101	100pF 5% 50V 0402	2Y42	4822 124 80151	47µF 16V			
2V06	2022 552 05679	1µF 10% 16V 0805	2Y43	2238 586 59812	100nF 20% 50V 0603			
2V06	2222 780 15663	1µF 10% 0805	2Y45	2238 586 59812	100nF 20% 50V 0603			
2V07	2022 552 05679	1µF 10% 16V 0805	2Z04	4822 051 30331	330Ω 5% 0.062W			
2V07	2222 780 15663	1µF 10% 0805	2Z05	4822 051 30331	330Ω 5% 0.062W			
2V08	2022 552 05679	1µF 10% 16V 0805	2Z06	4822 051 30331	330Ω 5% 0.062W			
2V08	2222 780 15663	1µF 10% 0805	2Z07	4822 051 30331	330Ω 5% 0.062W			
2V09	2022 552 05679	1µF 10% 16V 0805	2Z08	4822 051 30331	330Ω 5% 0.062W			
2V09	2222 780 15663	1µF 10% 0805	2Z09	4822 051 30759	75Ω 5% 0.062W			
2V10	2022 552 05679	1µF 10% 16V 0805	2Z20	4822 051 30331	330Ω 5% 0.062W			
2V10	2222 780 15663	1µF 10% 0805	2Z21	4822 051 30331	330Ω 5% 0.062W			
2V11	2022 552 05679	1µF 10% 16V 0805	2Z22	4822 051 30331	330Ω 5% 0.062W			
2V11	2222 780 15663	1µF 10% 0805	2Z23	4822 051 30331	330Ω 5% 0.062W			

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3A01	3198 031 06810	680Ω 5% 0.01W 0402
3A05	3198 031 01810	180Ω 5% 0402
3A06	3198 031 02710	270Ω 5% 0.1W 0402
3A10	3198 031 04730	47Ω 5% 0402
3A11	3198 031 01830	18kΩ 5% 0.01W 0402
3A12	3198 031 04730	47Ω 5% 0402
3A13	3198 031 04730	47Ω 5% 0402
3A14	3198 031 01830	18kΩ 5% 0.01W 0402
3A15	4822 117 13601	22kΩ 5% 0402
3A17	4822 117 11297	100kΩ 5% 0.1W
3A19	4822 117 11297	100kΩ 5% 0.1W
3A20	4822 117 13603	33kΩ 5% 0402
3A21	3198 031 02730	27kΩ 5% 0402
3A22	4822 117 13603	33kΩ 5% 0402
3A23	3198 031 02730	27kΩ 5% 0402
3A24	4822 117 13603	33kΩ 5% 0402
3A25	4822 117 13603	33kΩ 5% 0402
3A26	3198 031 04730	47Ω 5% 0402
3A27	3198 031 04730	47Ω 5% 0402
3A28	4822 117 11297	100kΩ 5% 0.1W
3A29	4822 117 11297	100kΩ 5% 0.1W
3A31▲	5322 117 11726	10Ω 5%
3A33	3198 031 01810	180Ω 5% 0402
3A38	3198 031 04730	47Ω 5% 0402
3A39	4822 117 13545	100Ω 1% 0402
3A40	4822 117 13545	100Ω 1% 0402
3A42	4822 117 13548	1kΩ 5% 0402
3A45	4822 117 13548	1kΩ 5% 0402
3A46	4822 117 13548	1kΩ 5% 0402
3A50	3198 031 04720	4.7kΩ 5% 0402
3A53	3198 031 03910	390Ω 1% 0402
3A56	3198 031 06820	6.8kΩ 5% 0.01W 0402
3A57	4822 117 13602	2.2kΩ 5% 0.01W 0402
3A60	3198 031 02730	27kΩ 5% 0402
3A65	3198 031 04720	4.7kΩ 5% 0402
3A67	3198 031 04720	4.7kΩ 5% 0402
3A80	4822 117 13545	100Ω 1% 0402
3B02	4822 117 13597	330Ω 5% 0.01W 0402
3B03	4822 117 13597	330Ω 5% 0.01W 0402
3B04	4822 117 13606	10kΩ 5% 0.01W 0402
3B05	3198 031 04730	47Ω 5% 0402
3B06	3198 031 04730	47Ω 5% 0402
3B07	4822 117 13596	220Ω 5% 0.01W 0402
3B08	4822 117 13596	220Ω 5% 0.01W 0402
3B14	4822 117 13597	330Ω 5% 0.01W 0402
3B15	4822 117 13597	330Ω 5% 0.01W 0402
3B16	4822 117 13606	10kΩ 5% 0.01W 0402
3B17	3198 031 04730	47Ω 5% 0402
3B18	3198 031 04730	47Ω 5% 0402
3B19	4822 117 13596	220Ω 5% 0.01W 0402
3B20	4822 117 13596	220Ω 5% 0.01W 0402
3B23	4822 117 13548	1kΩ 5% 0402
3B24	4822 117 13548	1kΩ 5% 0402
3B30	4822 117 13597	330Ω 5% 0.01W 0402
3B32	4822 117 13597	330Ω 5% 0.01W 0402
3B34	4822 117 13597	330Ω 5% 0.01W 0402
3B36	3198 031 01230	12kΩ 5% 0402
3B37	4822 117 13548	1kΩ 5% 0402
3B38	4822 117 13548	1kΩ 5% 0402
3B40	4822 117 13548	1kΩ 5% 0402
3B41	3198 031 03390	33Ω 1% 0402
3B43	4822 117 13606	10kΩ 5% 0.01W 0402
3B44	3198 031 03390	33Ω 1% 0402
3B45	4822 117 13606	10kΩ 5% 0.01W 0402
3B46	3198 031 03390	33Ω 1% 0402
3B48	2322 706 71002	1kΩ 1% 0402
3B49	3198 031 04730	47Ω 5% 0402
3B50	4822 117 13543	470Ω 5% 0402
3B51	3198 021 34780	4.7Ω 5% 0603
3B52	4822 117 13597	330Ω 5% 0.01W 0402
3B53	2322 702 60338	3.3Ω 5% 0603
3B56	2350 033 11339	4 x 33Ω 5%
3B57	2350 033 11339	4 x 33Ω 5%
3B58	2350 033 11339	4 x 33Ω 5%
3B59	2350 033 11339	4 x 33Ω 5%
3B60	4822 117 13545	100Ω 1% 0402
3B61	4822 117 13545	100Ω 1% 0402
3B62	2350 033 11339	4 x 33Ω 5%
3B63	4822 117 13605	Jumper 0402
3B64	4822 117 13543	470Ω 5% 0402
3B65	4822 117 13548	1kΩ 5% 0402
3B66	4822 117 13543	470Ω 5% 0402

3B67	4822 117 13548	1kΩ 5% 0402	3D58	4822 117 13601	22kΩ 5% 0402	3F43	4822 117 13545	100Ω 1% 0402
3B69	4822 117 13605	Jumper 0402	3D59	3198 031 01220	1.2kΩ 5% 0.01W 0402	3F4A	3198 031 01050	1MΩ 5% 0402
3B70	4822 117 13543	470Ω 5% 0402	3D60	3198 031 01220	1.2kΩ 5% 0.01W 0402	3F4B	4822 117 13546	47Ω 5% 0402
3B71	4822 117 13548	1kΩ 5% 0402	3D61	3198 031 03920	3.9kΩ 5% 0402	3F4C	4822 117 13545	100Ω 1% 0402
3B72	4822 117 13543	470Ω 5% 0402	3D62	4822 117 11297	100kΩ 5% 0.1W	3F4D	4822 117 13545	100Ω 1% 0402
3B73	4822 117 13548	1kΩ 5% 0402	3D63	3198 031 03920	3.9kΩ 5% 0402	3F4E	4822 117 13545	100Ω 1% 0402
3B75	4822 117 13605	Jumper 0402	3D64	4822 117 11297	100kΩ 5% 0.1W	3F4F	4822 117 13545	100Ω 1% 0402
3B76	4822 117 13543	470Ω 5% 0402	3D65	4822 117 13606	10kΩ 5% 0.01W 0402	3F4H	3198 031 04720	4.7kΩ 5% 0402
3B77	4822 117 13548	1kΩ 5% 0402	3D66	4822 117 13606	10kΩ 5% 0.01W 0402	3F4I	3198 031 04720	4.7kΩ 5% 0402
3B78	4822 117 13543	470Ω 5% 0402	3D67	3198 031 05610	560Ω 5% 0.01W 0402	3F4J	4822 117 13602	2.2kΩ 5% 0.01W 0402
3B79	4822 117 13548	1kΩ 5% 0402	3D68	3198 031 05610	560Ω 5% 0.01W 0402	3F4K	4822 117 13602	2.2kΩ 5% 0.01W 0402
3B80	3198 031 03390	33Ω 1% 0402	3D69	4822 117 13601	22kΩ 5% 0402	3F4N	3198 031 04720	4.7kΩ 5% 0402
3B82	4822 117 13606	10kΩ 5% 0.01W 0402	3D70	2322 762 60332	3.3kΩ 5% 2512	3F4P	3198 031 04720	4.7kΩ 5% 0402
3B83	4822 117 13606	10kΩ 5% 0.01W 0402	3D71	2350 033 11223	22kΩ 5%	3F4Q	3198 031 04720	4.7kΩ 5% 0402
3B90	3198 031 02290	22Ω 5% 0.1W 0402	3D72	2322 762 60332	3.3kΩ 5% 2512	3F4S	3198 031 03390	33Ω 1% 0402
3B91	4822 117 11297	100kΩ 5% 0.1W	3D73	2350 033 11223	22kΩ 5%	3F4T	3198 031 03390	33Ω 1% 0402
3B92	3198 031 02290	22Ω 5% 0.1W 0402	3D74	4822 117 13601	22kΩ 5% 0402	3F4U	3198 031 03390	33Ω 1% 0402
3B93	4822 117 11297	100kΩ 5% 0.1W	3D75	3198 031 01520	1.2kΩ 5% 0.01W 0402	3F4V	3198 031 03390	33Ω 1% 0402
3C00	3198 031 02710	270Ω 5% 0.1W 0402	3D76	3198 031 01520	1.2kΩ 5% 0.01W 0402	3F4W	3198 031 03390	33Ω 1% 0402
3C01	3198 031 06810	680Ω 5% 0.01W 0402	3D77	4822 117 13601	22kΩ 5% 0402	3F4X	3198 031 03390	33Ω 1% 0402
3C02	4822 117 13545	100Ω 1% 0402	3D78	2322 762 60107	0.1Ω 5% 2512	3F4Y	3198 031 03390	33Ω 1% 0402
3C05	3198 031 01810	180Ω 5% 0402	3D79	2322 762 60107	0.1Ω 5% 2512	3F4Z	3198 031 03390	33Ω 1% 0402
3C06	3198 031 02710	270Ω 5% 0.1W 0402	3D80	3198 031 04780	4.7Ω 5% 0402	3F56	4822 117 13545	100Ω 1% 0402
3C30	3198 031 05610	560Ω 5% 0.01W 0402	3D81	3198 031 04780	4.7Ω 5% 0402	3F57	4822 117 13606	10kΩ 5% 0.01W 0402
3C31▲	5322 117 11726	10Ω 5%	3D82	2322 762 60331	330Ω 5% 2512	3F5A	3198 031 03390	33Ω 1% 0402
3C32	3198 031 01220	1.2kΩ 5% 0.01W 0402	3D83	2322 762 60331	330Ω 5% 2512	3F5B	3198 031 03390	33Ω 1% 0402
3C33	3198 031 01810	180Ω 5% 0402	3D84	3198 031 04720	4.7kΩ 5% 0402	3F5C	3198 031 03390	33Ω 1% 0402
3C34	3198 031 01220	1.2kΩ 5% 0.01W 0402	3D85	3198 031 04720	4.7kΩ 5% 0402	3F5D	3198 031 03390	33Ω 1% 0402
3C39	4822 117 13545	100Ω 1% 0402	3D86	3198 031 01830	18kΩ 5% 0.01W 0402	3F5E	3198 031 03390	33Ω 1% 0402
3C40	4822 117 13545	100Ω 1% 0402	3D87	3198 031 01830	18kΩ 5% 0.01W 0402	3F5F	3198 031 03390	33Ω 1% 0402
3C45	3198 031 04730	47Ω 5% 0402	3D88	3198 031 06810	680Ω 5% 0.01W 0402	3F5G	3198 031 03390	33Ω 1% 0402
3C50	3198 031 04720	4.7kΩ 5% 0402	3D89	3198 031 06810	680Ω 5% 0.01W 0402	3F5H	3198 031 03390	33Ω 1% 0402
3C53	3198 031 03910	390Ω 1% 0402	3D90	4822 117 13601	22kΩ 5% 0402	3F5I	3198 031 03390	33Ω 1% 0402
3C56	3198 031 06820	6.8kΩ 5% 0.01W 0402	3D91	4822 117 13601	22kΩ 5% 0402	3F5J	3198 031 03390	33Ω 1% 0402
3C57	4822 117 13602	2.2kΩ 5% 0.01W 0402	3D92	3198 031 01520	1.2kΩ 5% 0.01W 0402	3F5K	3198 031 03390	33Ω 1% 0402
3C60	3198 031 02730	27kΩ 5% 0402	3D93	3198 031 01520	1.2kΩ 5% 0.01W 0402	3F5L	3198 031 03390	33Ω 1% 0402
3C65	3198 031 04720	4.7kΩ 5% 0402	3D94	3198 031 03920	3.9kΩ 5% 0402	3F5M	3198 031 03390	33Ω 1% 0402
3C67	3198 031 04720	4.7kΩ 5% 0402	3D95	4822 117 11297	100kΩ 5% 0.1W	3F5N	3198 031 03390	33Ω 1% 0402
3C80	4822 117 13545	100Ω 1% 0402	3D96	3198 031 03920	3.9kΩ 5% 0402	3F5O	3198 031 03390	33Ω 1% 0402
3C81	3198 031 03390	33Ω 1% 0402	3D97	4822 117 11297	100kΩ 5% 0.1W	3F5P	3198 031 03390	33Ω 1% 0402
3D00	4822 117 13605	Jumper 0402	3D98	4822 117 13606	10kΩ 5% 0.01W 0402	3F5Q	3198 031 03390	33Ω 1% 0402
3D01	3198 031 04720	4.7kΩ 5% 0402	3D99	4822 117 13606	10kΩ 5% 0.01W 0402	3F5R	3198 031 03390	33Ω 1% 0402
3D02	4822 117 13606	10kΩ 5% 0.01W 0402	3DA1	3198 031 05610	560Ω 5% 0.01W 0402	3F5S	3198 031 03390	33Ω 1% 0402
3D05	4822 117 13603	33kΩ 5% 0402	3DA2	3198 031 05610	560Ω 5% 0.01W 0402	3F5T	3198 031 03390	33Ω 1% 0402
3D07	4822 117 13603	33kΩ 5% 0402	3DA3	3198 031 01820	1.8kΩ 5% 0.01W 0402	3F5U	3198 031 03390	33Ω 1% 0402
3D09	4822 117 13602	2.2kΩ 5% 0.01W 0402	3DA4	3198 031 03920	3.9kΩ 5% 0402	3F5V	3198 031 03390	33Ω 1% 0402
3D10	2322 762 60332	3.3kΩ 5% 2512	3DA5	4822 117 13606	10kΩ 5% 0.01W 0402	3F5W	3198 031 03390	33Ω 1% 0402
3D11	2350 033 11223	22kΩ 5%	3DA6	4822 117 13603	33kΩ 5% 0402	3F5X	3198 031 03390	33Ω 1% 0402
3D12	2322 762 60332	3.3kΩ 5% 2512	3DA7	4822 117 13606	10kΩ 5% 0.01W 0402	3F5Y	3198 031 03390	33Ω 1% 0402
3D13	2350 033 11223	22kΩ 5%	3DA8	4822 117 13606	10kΩ 5% 0.01W 0402	3F5Z	3198 031 03390	33Ω 1% 0402
3D14	3198 031 02240	220kΩ 5% 0.1W 0402	3DC2	4822 117 13605	Jumper 0402	3F61	4822 117 13545	100Ω 1% 0402
3D15	3198 031 04730	47Ω 5% 0402	3DC8	4822 117 13605	Jumper 0402	3F62	4822 117 13545	100Ω 1% 0402
3D16	3198 031 02240	220kΩ 5% 0.1W 0402	3DF1	4822 117 13545	100Ω 1% 0402	3F63	4822 117 13596	220Ω 5% 0.01W 0402
3D17	3198 031 05620	5.6kΩ 5% 0.01W 0402	3DF2	4822 126 14324	33pF 5% 50V 0402	3F65	4822 117 13606	10kΩ 5% 0.01W 0402
3D18	3198 031 02720	2.7kΩ 5% 0.01W 0402	3DF3	4822 126 14324	33pF 5% 50V 0402	3F66	4822 117 13606	10kΩ 5% 0.01W 0402
3D19	3198 031 02240	220kΩ 5% 0.1W 0402	3DF4	4822 126 14324	33pF 5% 50V 0402	3F67	4822 117 13545	100Ω 1% 0402
3D20	3198 031 04730	47Ω 5% 0402	3DF5	4822 126 14324	33pF 5% 50V 0402	3F68	4822 117 13546	47Ω 5% 0402
3D21	3198 031 04730	47Ω 5% 0402	3F13	3198 031 04720	4.7kΩ 5% 0402	3F69	4822 117 13546	47Ω 5% 0402
3D22	4822 117 13602	2.2kΩ 5% 0.01W 0402	3F18	3198 031 04720	4.7kΩ 5% 0402	3F6A	3198 031 03390	33Ω 1% 0402
3D23	3198 031 02240	220kΩ 5% 0.1W 0402	3F1N	4822 117 13606	10kΩ 5% 0.01W 0402	3F70	4822 117 13546	47Ω 5% 0402
3D24	3198 031 04730	47Ω 5% 0402	3F1P	4822 117 11297	100kΩ 5% 0.1W	3F71	4822 117 13606	10kΩ 5% 0.01W 0402
3D25	3198 031 04730	47Ω 5% 0402	3F1Q	4822 117 13606	10kΩ 5% 0.01W 0402	3F72	4822 117 13606	10kΩ 5% 0.01W 0402
3D26	3198 031 04730	47Ω 5% 0402	3F1R	4822 117 13603	33kΩ 5% 0402	3F73	4822 117 13545	100Ω 1% 0402
3D27	3198 031 04730	47Ω 5% 0402	3F1W	3198 031 04730	47Ω 5% 0402	3F74	4822 117 13545	100Ω 1% 0402
3D28	4822 117 13601	22kΩ 5% 0402	3F1Y	3198 031 04730	47Ω 5% 0402	3F75	4822 117 13546	47Ω 5% 0402
3D29	3198 031 02720	2.7kΩ 5% 0.01W 0402	3F1Z	4822 117 13606	10kΩ 5% 0.01W 0402	3F76	4822 117 13545	100Ω 1% 0402
3D30	3198 031 04730	47Ω 5% 0402	3F21	4822 117 13606	10kΩ 5% 0.01W 0402	3F77	4822 117 13545	100Ω 1% 0402
3D31	4822 117 13602	2.2kΩ 5% 0.01W 0402	3F22	4822 117 13546	47Ω 5% 0402	3F78	4822 117 13545	100Ω 1% 0402
3D32	4822 117 11297	100kΩ 5% 0.1W	3F23	3198 031 04720	4.7kΩ 5% 0402	3F79	4822 117 13597	330Ω 5% 0.01W 0402
3D33	3198 031 04730	47Ω 5% 0402	3F24	3198 031 04720	4.7kΩ 5% 0402	3F80	4822 117 13543	470Ω 5% 0402
3D34	4822 117 13606	10kΩ 5% 0.01W 0402	3F2D	4822 117 13602	2.2kΩ 5% 0.01W 0402	3F81	4822 117 13597	330Ω 5% 0.01W 0402
3D35	3198 031 04730	47Ω 5% 0402	3F2S	4822 117 13545	100Ω 1% 0402	3F82	4822 117 13597	330Ω 5% 0.01W 0402
3D36	3198 031 04730	47Ω 5% 0402	3F2T	4822 117 13545	100Ω 1% 0402	3F83	4822 117 11297	100kΩ 5% 0.1W
3D37	4822 117 13603	33kΩ 5% 0402	3F2U	4822 117 13546	47Ω 5% 0402	3F84	4822 117 11297	100kΩ 5% 0.1W
3D38	3198 031 04720	4.7kΩ 5% 0402	3F2W	3198 031 04720	4.7kΩ 5% 0402	3F90	4822 117 13602	2.2kΩ 5% 0.01W 0402
3D39	4822 117 13602	2.2kΩ 5% 0.01W 0402	3F2Y	2322 706 71003	10kΩ 5% 0402	3F91	4822 117 13548	1kΩ 5% 0402
3D40	4822 117 13606	10kΩ 5% 0.01W 0402	3F2Y	4822 117 13606	10kΩ 5% 0.01W 0402	3F92	4822 117 13545	100Ω 1% 0402
3D41	4822 117 13601	22kΩ 5% 0402	3F2Z	4822 117 13548	1kΩ 5% 0402	3F93	4822 117 13545	100Ω 1% 0402
3D42	3198 031 01220	1.2kΩ 5% 0.01W 0402	3F30	2322 706 71203	12kΩ 5% 0402	3F94	3198 031 04720	4.7kΩ 5% 0402
3D43	3198 031 01220	1.2kΩ 5% 0.01W 0402	3F30	3198 031 01230	12kΩ 5% 0402	3H01	3198 031 04720	4.7kΩ 5% 0402
3D44	4822 117 13601	22kΩ 5% 0402	3F31	2322 706 78202	8.2kΩ 1% 0402 RC321	3H02	3198 031 06890	68Ω 5% 0402
3D45	2322 762 60107	0.1Ω 5% 2512	3F31	3198 031 08220	8.2kΩ 5% 0.5W	3H03	3198 031 04720	4.7kΩ 5% 0402
3D46	2322 762 60107	0.1Ω 5% 2512	3F36	3198 031 04730	47Ω 5% 0402	3H04	3198 031 01820	1.8kΩ 5% 0.01W 0402
3D47	3198 031 04780	4.7Ω 5% 0402	3F36	4822 117 13606	10kΩ 5% 0.01W 0402	3H05	3198 031 01820	1.8kΩ 5% 0.01W 0402
3D48	3198 031 04780	4.7Ω 5% 0402	3F39	4822 117 13606	10kΩ 5% 0.01W 0402</			

3H18	3198 031 04720	4.7kΩ 5% 0402	3I71	4822 117 13606	10kΩ 5% 0.01W 0402	3L56	3198 031 02290	22Ω 5% 0.1W 0402
3H19	4822 117 13548	1kΩ 5% 0402	3I74	3198 031 03930	39kΩ 5% 0402	3L57	3198 031 02290	22Ω 5% 0.1W 0402
3H20	2322 705 70399	39Ω 5% 0402	3I75	2322 734 63309	33Ω 1% 0.1W 0805	3L58	3198 031 02290	22Ω 5% 0.1W 0402
3H21	2322 705 70399	39Ω 5% 0402	3I76	2322 734 63309	33Ω 1% 0.1W 0805	3L59	3198 031 02290	22Ω 5% 0.1W 0402
3H22	3198 031 04720	4.7kΩ 5% 0402	3I77	3198 031 01510	150Ω 5% 0.01W 0402	3L60	3198 031 02290	22Ω 5% 0.1W 0402
3H23	3198 031 04720	4.7kΩ 5% 0402	3I78	4822 051 30221	220Ω 5% 0.062W	3L61	3198 031 02290	22Ω 5% 0.1W 0402
3H24	4822 117 13545	100Ω 1% 0402	3I79	3198 031 04740	470kΩ 5% 0402	3L62	3198 031 02290	22Ω 5% 0.1W 0402
3H26	4822 117 13545	100Ω 1% 0402	3I80	4822 117 11297	100kΩ 5% 0.1W	3L63	3198 031 02290	22Ω 5% 0.1W 0402
3H27	4822 117 13606	10kΩ 5% 0.01W 0402	3I81	2322 734 63309	33Ω 1% 0.1W 0805	3L64	3198 031 02290	22Ω 5% 0.1W 0402
3H28	3198 031 04720	4.7kΩ 5% 0402	3I82	2322 734 63309	33Ω 1% 0.1W 0805	3L65	3198 031 02290	22Ω 5% 0.1W 0402
3H29	3198 031 04720	4.7kΩ 5% 0402	3I83	3198 031 01510	150Ω 5% 0.01W 0402	3L66	3198 031 02290	22Ω 5% 0.1W 0402
3H30	4822 117 13545	100Ω 1% 0402	3I84	3198 031 02240	220kΩ 5% 0.1W 0402	3L67	3198 031 02290	22Ω 5% 0.1W 0402
3H31	3198 031 04720	4.7kΩ 5% 0402	3I86	4822 051 30102	1kΩ 5% 0.062W	3L68	3198 031 02290	22Ω 5% 0.1W 0402
3H32	3198 031 04720	4.7kΩ 5% 0402	3I87	4822 117 13606	10kΩ 5% 0.01W 0402	3L69	3198 031 02290	22Ω 5% 0.1W 0402
3H33	4822 117 13545	100Ω 1% 0402	3I88	3198 031 02240	220kΩ 5% 0.1W 0402	3L70	3198 031 02290	22Ω 5% 0.1W 0402
3H40	4822 117 13545	100Ω 1% 0402	3I89	4822 051 30221	220Ω 5% 0.062W	3L71	3198 031 02290	22Ω 5% 0.1W 0402
3H44	3198 031 04720	4.7kΩ 5% 0402	3I90	3198 031 04740	470kΩ 5% 0402	3L72	4822 117 13546	47Ω 5% 0402
3H45	3198 031 04720	4.7kΩ 5% 0402	3I91	4822 117 13606	10kΩ 5% 0.01W 0402	3L73	4822 117 13546	47Ω 5% 0402
3H46	3198 031 04720	4.7kΩ 5% 0402	3I92	3198 031 03930	39kΩ 5% 0402	3L74	4822 117 13546	47Ω 5% 0402
3H48	3198 031 06890	68Ω 5% 0402	3I93	4822 117 13606	10kΩ 5% 0.01W 0402	3L75	4822 117 13546	47Ω 5% 0402
3H49	3198 031 06890	68Ω 5% 0402	3I94	4822 117 13606	10kΩ 5% 0.01W 0402	3L76	4822 117 13546	47Ω 5% 0402
3H50	4822 117 13548	1kΩ 5% 0402	3I95	3198 031 06840	680kΩ 5% 0.01W 0402	3L77	4822 117 13546	47Ω 5% 0402
3H51	4822 117 13548	1kΩ 5% 0402	3I96	3198 031 04730	47Ω 5% 0402	3L81	3198 031 03390	33Ω 1% 0402
3H52	3198 031 04720	4.7kΩ 5% 0402	3I97	4822 117 11297	100kΩ 5% 0.1W	3L82	3198 031 03390	33Ω 1% 0402
3H70	3198 031 04720	4.7kΩ 5% 0402	3I98	4822 117 13606	10kΩ 5% 0.01W 0402	3L83	3198 031 03390	33Ω 1% 0402
3H71	3198 031 04720	4.7kΩ 5% 0402	3I99	4822 117 13596	220Ω 5% 0.01W 0402	3L84	3198 031 03390	33Ω 1% 0402
3H72	4822 117 13545	100Ω 1% 0402	3J03	3198 031 06890	68Ω 5% 0402	3L85	3198 031 03390	33Ω 1% 0402
3H73	4822 117 13546	47Ω 5% 0402	3J04	4822 117 13546	47Ω 5% 0402	3L86	3198 031 03390	33Ω 1% 0402
3H74	3198 031 06890	68Ω 5% 0402	3J05	3198 031 02290	22Ω 5% 0.1W 0402	3L87	3198 031 03390	33Ω 1% 0402
3H75	4822 117 13545	100Ω 1% 0402	3J06	3198 031 02290	22Ω 5% 0.1W 0402	3L88	3198 031 03390	33Ω 1% 0402
3H79	3198 031 02290	22Ω 5% 0.1W 0402	3J07	3198 031 06890	68Ω 5% 0402	3L89	3198 031 02290	22Ω 5% 0.1W 0402
3H80	2350 033 11103	4x 10kΩ 5% Netw.	3J08	3198 031 06890	68Ω 5% 0402	3L90	4822 117 13548	1kΩ 5% 0402
3H81	2350 033 11103	4x 10kΩ 5% Netw.	3J09	3198 031 06890	68Ω 5% 0402	3L91	3198 031 03390	33Ω 1% 0402
3H82	3198 031 01050	1MΩ 5% 0402	3J10	4822 117 13548	1kΩ 5% 0402	3L92	3198 031 03390	33Ω 1% 0402
3H83	3198 031 04720	4.7kΩ 5% 0402	3J11	3198 031 06890	68Ω 5% 0402	3L93	3198 031 03390	33Ω 1% 0402
3H84	3198 031 04720	4.7kΩ 5% 0402	3J14	4822 117 13548	1kΩ 5% 0402	3L94	3198 031 03390	33Ω 1% 0402
3H85	3198 031 04720	4.7kΩ 5% 0402	3J15	4822 117 13548	1kΩ 5% 0402	3L95	3198 031 03390	33Ω 1% 0402
3H86	3198 031 04720	4.7kΩ 5% 0402	3J16	4822 117 13548	1kΩ 5% 0402	3L96	4822 117 13545	100Ω 1% 0402
3H87	3198 031 04720	4.7kΩ 5% 0402	3J17	4822 117 13546	47Ω 5% 0402	3L97	4822 117 13545	100Ω 1% 0402
3H88	3198 031 04720	4.7kΩ 5% 0402	3L00	4822 117 11297	100kΩ 5% 0.1W	3L98	4822 117 11297	100kΩ 5% 0.1W
3H89	3198 031 01590	15Ω 5% 0402	3L01	3198 031 01090	10Ω 5% 0.01W 0402	3L99	4822 117 13606	10kΩ 5% 0.01W 0402
3H90	3198 031 04720	4.7kΩ 5% 0402	3L02	3198 031 05630	56kΩ 5% 0402	3LA0	4822 117 13606	10kΩ 5% 0.01W 0402
3H91	3198 031 04720	4.7kΩ 5% 0402	3L03	3198 031 06830	68kΩ 5% 0.01W 0402	3LA1	4822 117 13606	10kΩ 5% 0.01W 0402
3H92	3198 031 07590	75Ω 5% 0402	3L04	3198 031 03390	33Ω 1% 0402	3LA2	4822 117 13606	10kΩ 5% 0.01W 0402
3H93	3198 031 04720	4.7kΩ 5% 0402	3L05	3198 031 03390	33Ω 1% 0402	3LA3	4822 117 13606	10kΩ 5% 0.01W 0402
3H94	3198 031 04720	4.7kΩ 5% 0402	3L06	3198 031 02290	22Ω 5% 0.1W 0402	3LA4	4822 117 13606	10kΩ 5% 0.01W 0402
3H95	4822 117 13597	330Ω 5% 0.01W 0402	3L07	3198 031 02290	22Ω 5% 0.1W 0402	3LA5	4822 117 13548	1kΩ 5% 0402
3H97	3198 031 04720	4.7kΩ 5% 0402	3L08	4822 117 13546	47Ω 5% 0402	3LA6	4822 117 13606	10kΩ 5% 0.01W 0402
3H98	4822 117 13545	100Ω 1% 0402	3L09	4822 117 13546	47Ω 5% 0402	3LA7	4822 117 13606	10kΩ 5% 0.01W 0402
3H99	4822 117 13545	100Ω 1% 0402	3L10	4822 117 13546	47Ω 5% 0402	3LA9	4822 117 13606	10kΩ 5% 0.01W 0402
3I00	4822 117 13545	100Ω 1% 0402	3L11	4822 117 13546	47Ω 5% 0402	3LB4	4822 117 13606	10kΩ 5% 0.01W 0402
3I01	4822 117 11297	100kΩ 5% 0.1W	3L12	4822 117 13546	47Ω 5% 0402	3LB5	4822 117 13606	10kΩ 5% 0.01W 0402
3I02	4822 117 13545	100Ω 1% 0402	3L13	4822 117 13546	47Ω 5% 0402	3LB7	4822 117 13606	10kΩ 5% 0.01W 0402
3I03	4822 117 11297	100kΩ 5% 0.1W	3L14	4822 117 13546	47Ω 5% 0402	3LB8	4822 117 13606	10kΩ 5% 0.01W 0402
3I12	4822 117 13545	100Ω 1% 0402	3L15	4822 117 13546	47Ω 5% 0402	3LB9	4822 117 13606	10kΩ 5% 0.01W 0402
3I13	4822 117 11297	100kΩ 5% 0.1W	3L16	4822 117 13546	47Ω 5% 0402	3LC0	4822 117 13606	10kΩ 5% 0.01W 0402
3I14	4822 117 13545	100Ω 1% 0402	3L17	4822 117 13546	47Ω 5% 0402	3LC1	4822 117 13606	10kΩ 5% 0.01W 0402
3I15	4822 117 11297	100kΩ 5% 0.1W	3L18	4822 117 13546	47Ω 5% 0402	3LC2	4822 117 13606	10kΩ 5% 0.01W 0402
3I16	4822 117 13601	22kΩ 5% 0402	3L19	4822 117 13546	47Ω 5% 0402	3LC3	4822 117 13606	10kΩ 5% 0.01W 0402
3I17	3198 031 04730	47Ω 5% 0402	3L20	4822 117 13546	47Ω 5% 0402	3LC4	4822 117 13606	10kΩ 5% 0.01W 0402
3I18	3198 031 06890	68Ω 5% 0402	3L21	4822 117 13546	47Ω 5% 0402	3LC5	4822 117 11297	100kΩ 5% 0.1W
3I19▲	4822 117 11151	1Ω 5%	3L22	4822 117 13548	1kΩ 5% 0402	3LC6	3198 031 04720	4.7kΩ 5% 0402
3I21	4822 117 13545	100Ω 1% 0402	3L23	4822 117 13546	47Ω 5% 0402	3LC7	3198 031 04720	4.7kΩ 5% 0402
3I22	4822 117 11297	100kΩ 5% 0.1W	3L24	4822 117 13548	1kΩ 5% 0402	3LC8	3198 031 06810	680Ω 5% 0.01W 0402
3I23	4822 117 13545	100Ω 1% 0402	3L25	4822 117 13546	47Ω 5% 0402	3LC9	4822 117 13606	10kΩ 5% 0.01W 0402
3I24	4822 117 13548	1kΩ 5% 0402	3L26	4822 117 13546	47Ω 5% 0402	3LD0	4822 117 13606	10kΩ 5% 0.01W 0402
3I25	4822 117 13545	100Ω 1% 0402	3L27	4822 117 13546	47Ω 5% 0402	3LD1	4822 117 13606	10kΩ 5% 0.01W 0402
3I26	4822 117 11297	100kΩ 5% 0.1W	3L28	4822 117 13548	1kΩ 5% 0402	3LD3	4822 117 13606	10kΩ 5% 0.01W 0402
3I27	4822 117 13545	100Ω 1% 0402	3L29	4822 117 13546	47Ω 5% 0402	3LD4	4822 117 13606	10kΩ 5% 0.01W 0402
3I28	4822 117 13548	1kΩ 5% 0402	3L30	3198 031 03390	33Ω 1% 0402	3LD5	4822 117 13606	10kΩ 5% 0.01W 0402
3I31	4822 051 30759	75Ω 5% 0.062W	3L31	4822 117 13546	47Ω 5% 0402	3LD6	4822 117 13606	10kΩ 5% 0.01W 0402
3I32	4822 051 30759	75Ω 5% 0.062W	3L32	4822 117 13548	1kΩ 5% 0402	3LD7	4822 117 13606	10kΩ 5% 0.01W 0402
3I33	4822 051 30759	75Ω 5% 0.062W	3L33	4822 117 13546	47Ω 5% 0402	3LD8	4822 117 13606	10kΩ 5% 0.01W 0402
3I46	3198 031 07590	75Ω 5% 0402	3L34	3198 031 03390	33Ω 1% 0402	3LD9	4822 117 13606	10kΩ 5% 0.01W 0402
3I51	4822 051 30759	75Ω 5% 0.062W	3L36	4822 117 11297	100kΩ 5% 0.1W	3LE0	4822 117 13606	10kΩ 5% 0.01W 0402
3I52	4822 051 30759	75Ω 5% 0.062W	3L37	4822 117 13606	10kΩ 5% 0.01W 0402	3LE1	4822 117 11373	100Ω 1% 0805
3I53	4822 051 30759	75Ω 5% 0.062W	3L38	3198 031 04740	470kΩ 5% 0402	3LE2	4822 117 13545	100Ω 1% 0402
3I54	4822 051 30101	100Ω 5% 0.062W	3L39	3198 031 03390	33Ω 1% 0402	3LE3	3198 031 04720	4.7kΩ 5% 0402
3I55	3198 031 04720	4.7kΩ 5% 0402	3L40	4822 117 13545	100Ω 1% 0402	3LE4	3198 031 04720	4.7kΩ 5% 0402
3I56	3198 031 04720	4.7kΩ 5% 0402	3L41	4822 117 13546	47Ω 5% 0402	3LE5	4822 117 13606	10kΩ 5% 0.01W 0402
3I57	4822 051 30101	100Ω 5% 0.062W	3L42	4822 117 13546	47Ω 5% 0402	3LE6	4822 117 13606	10kΩ 5% 0.01W 0402
3I58	3198 031 04720	4.7kΩ 5% 0402	3L43	4822 117 13546	47Ω 5% 0402	3LE7	4822 117 13606	10kΩ 5% 0.01W 0402
3I59	4822 117 13602	2.2kΩ 5% 0.01W 0402	3L44	4822 117 13546	47Ω 5% 0402	3LE8	4822 117 13606	10kΩ 5% 0.01W 0402
3I59	4822 117 13605	Jumper 0402	3L45	4822 117 13546	47Ω 5% 0402	3LE9	4822 117 13606	10kΩ 5% 0.01W 0402
3I60	4822 117 11297	100kΩ 5% 0.1W	3L46	4822 117 13546	47Ω 5% 0402	3LF0	4822 11	

3LG5	4822 117 13545	100Ω 1% 0402	3LU3	4822 117 13606	10kΩ 5% 0.01W 0402	3N92	3198 031 04720	4.7kΩ 5% 0402
3LG6	4822 117 13545	100Ω 1% 0402	3LU4	4822 117 13606	10kΩ 5% 0.01W 0402	3O00	3198 031 01050	1MΩ 5% 0402
3LG7	4822 117 13545	100Ω 1% 0402	3LU5	4822 117 13601	22kΩ 5% 0402	3O01	4822 117 13543	470Ω 5% 0402
3LG8	4822 117 13545	100Ω 1% 0402	3LU6	3198 031 06830	68kΩ 5% 0.01W 0402	3O02	4822 117 13545	100Ω 1% 0402
3LG9	4822 117 13545	100Ω 1% 0402	3LU7	2322 705 70184	180Ω 5% 0402	3O03	4822 117 13606	10kΩ 5% 0.01W 0402
3LH0	4822 117 13545	100Ω 1% 0402	3LU8	3198 031 01090	10Ω 5% 0.01W 0402	3O04	4822 117 13548	1kΩ 5% 0402
3LH1	4822 117 13545	100Ω 1% 0402	3LU9	3198 031 04730	47Ω 5% 0402	3O05	3198 031 02710	270Ω 5% 0.1W 0402
3LH2	4822 117 11373	100Ω 1% 0805	3LV0	3198 031 03340	330kΩ 5% 0402	3O06	4822 117 13596	220Ω 5% 0.01W 0402
3LH3	4822 117 13545	100Ω 1% 0402	3LV1	3198 031 06830	68kΩ 5% 0.01W 0402	3O07	4822 117 13606	10kΩ 5% 0.01W 0402
3LH4	4822 117 13545	100Ω 1% 0402	3LV2	4822 117 13601	22kΩ 5% 0402	3O08	4822 117 13606	10kΩ 5% 0.01W 0402
3LH5	4822 117 13606	10kΩ 5% 0.01W 0402	3LV3	4822 117 13606	10kΩ 5% 0.01W 0402	3O09	4822 117 13596	220Ω 5% 0.01W 0402
3LH6	4822 117 13606	10kΩ 5% 0.01W 0402	3LV4	4822 117 13606	10kΩ 5% 0.01W 0402	3O10	3198 031 02710	270Ω 5% 0.1W 0402
3LH7	4822 117 11373	100Ω 1% 0805	3LV5	4822 117 13601	22kΩ 5% 0402	3O11	2120 550 00054	VDR 90V 1mA 0402
3LH8	4822 117 13545	100Ω 1% 0402	3LV6	3198 031 06830	68kΩ 5% 0.01W 0402	3O12	2120 550 00054	VDR 90V 1mA 0402
3LH9	4822 117 13545	100Ω 1% 0402	3LV7	2322 705 87564	560kΩ 5% 0402	3O13	2120 550 00054	VDR 90V 1mA 0402
3LJ0	4822 117 13545	100Ω 1% 0402	3LV8	3198 031 01090	10Ω 5% 0.01W 0402	3O14	2120 550 00054	VDR 90V 1mA 0402
3LJ1	4822 117 13545	100Ω 1% 0402	3LW0	4822 117 13606	10kΩ 5% 0.01W 0402	3O25	4822 117 13545	100Ω 1% 0402
3LJ2	4822 117 13606	10kΩ 5% 0.01W 0402	3LW1	4822 117 13606	10kΩ 5% 0.01W 0402	3O26	4822 117 13545	100Ω 1% 0402
3LJ3	4822 117 13606	10kΩ 5% 0.01W 0402	3LW2	4822 117 11297	100Ω 5% 0.1W	3O27	4822 117 13545	100Ω 1% 0402
3LJ4	4822 117 13545	100Ω 1% 0402	3LW3	4822 117 13601	22kΩ 5% 0402	3O28	4822 117 13545	100Ω 1% 0402
3LJ5	4822 117 13545	100Ω 1% 0402	3LW4	4822 117 13606	10kΩ 5% 0.01W 0402	3P01	3198 031 04720	4.7kΩ 5% 0402
3LJ6	4822 117 13545	100Ω 1% 0402	3LW5	4822 117 13545	100Ω 1% 0402	3P02	4822 117 13545	100Ω 1% 0402
3LJ7	4822 117 13545	100Ω 1% 0402	3LW6	3198 031 05620	5.6kΩ 5% 0.01W 0402	3P03	4822 117 13606	10kΩ 5% 0.01W 0402
3LJ8	4822 117 13545	100Ω 1% 0402	3LW6	4822 117 13606	10kΩ 5% 0.01W 0402	3P04	4822 117 13548	1kΩ 5% 0402
3LJ9	4822 117 13545	100Ω 1% 0402	3LW7	4822 117 13606	10kΩ 5% 0.01W 0402	3P05	4822 117 13606	10kΩ 5% 0.01W 0402
3LK0	4822 117 13545	100Ω 1% 0402	3LW8	4822 117 13545	100Ω 1% 0402	3P10	4822 117 13606	10kΩ 5% 0.01W 0402
3LK1	4822 117 13545	100Ω 1% 0402	3M00	4822 117 13545	100Ω 1% 0402	3P11	4822 117 13606	10kΩ 5% 0.01W 0402
3LK2	4822 117 13545	100Ω 1% 0402	3M01	4822 117 13545	100Ω 1% 0402	3P12	4822 117 13545	100Ω 1% 0402
3LK3	4822 117 13545	100Ω 1% 0402	3M02	4822 117 13545	100Ω 1% 0402	3P13	4822 117 13545	100Ω 1% 0402
3LK4	4822 117 13545	100Ω 1% 0402	3M04	4822 117 13548	1kΩ 5% 0402	3P14	4822 117 13545	100Ω 1% 0402
3LK5	4822 117 13545	100Ω 1% 0402	3M05	4822 117 13545	100Ω 1% 0402	3P15	4822 117 13606	10kΩ 5% 0.01W 0402
3LK6	4822 117 13545	100Ω 1% 0402	3M06	4822 117 13545	100Ω 1% 0402	3P16	4822 117 13606	10kΩ 5% 0.01W 0402
3LK7	4822 117 13545	100Ω 1% 0402	3M07	4822 117 13545	100Ω 1% 0402	3P17	4822 117 13606	10kΩ 5% 0.01W 0402
3LK8	4822 117 13545	100Ω 1% 0402	3M08	4822 117 13545	100Ω 1% 0402	3P18	4822 117 13606	10kΩ 5% 0.01W 0402
3LL0	4822 117 13545	100Ω 1% 0402	3MOD	4822 117 13548	1kΩ 5% 0402	3P19	4822 117 13606	10kΩ 5% 0.01W 0402
3LL1	4822 117 13545	100Ω 1% 0402	3MOI	4822 117 13545	100Ω 1% 0402	3P20	4822 117 13606	10kΩ 5% 0.01W 0402
3LL2	4822 117 13545	100Ω 1% 0402	3MOJ	4822 117 13545	100Ω 1% 0402	3P21	4822 117 13606	10kΩ 5% 0.01W 0402
3LL3	4822 117 13545	100Ω 1% 0402	3MOS	4822 117 13605	Jumper 0402	3P22	4822 117 13606	10kΩ 5% 0.01W 0402
3LL4	4822 117 13545	100Ω 1% 0402	3MOV	4822 117 13545	100Ω 1% 0402	3P23	4822 117 13606	10kΩ 5% 0.01W 0402
3LL5	4822 117 13545	100Ω 1% 0402	3M40	3198 031 08230	82kΩ 5% 0402	3P24	4822 117 13606	10kΩ 5% 0.01W 0402
3LL6	4822 117 13545	100Ω 1% 0402	3M41	4822 117 13548	1kΩ 5% 0402	3P25	4822 117 13606	10kΩ 5% 0.01W 0402
3LL7	4822 117 13545	100Ω 1% 0402	3M42	4822 117 13545	100Ω 1% 0402	3P26	4822 117 13606	10kΩ 5% 0.01W 0402
3LL8	4822 117 13597	330Ω 5% 0.01W 0402	3M43	4822 117 13545	100Ω 1% 0402	3P27	4822 117 13606	10kΩ 5% 0.01W 0402
3LL9	4822 117 13596	220Ω 5% 0.01W 0402	3M48	3198 031 03390	33Ω 1% 0402	3P28	4822 117 13606	10kΩ 5% 0.01W 0402
3LM0	4822 117 11373	100Ω 1% 0805	3M49	3198 031 04730	47Ω 5% 0402	3P29	4822 117 13606	10kΩ 5% 0.01W 0402
3LM1	4822 117 11373	100Ω 1% 0805	3M4A	4822 117 13597	330Ω 5% 0.01W 0402	3P30	4822 117 13606	10kΩ 5% 0.01W 0402
3LM2	4822 117 11373	100Ω 1% 0805	3M4B	4822 117 13606	10kΩ 5% 0.01W 0402	3P31	4822 117 13606	10kΩ 5% 0.01W 0402
3LM3	4822 117 11373	100Ω 1% 0805	3M4C	4822 117 13597	330Ω 5% 0.01W 0402	3P32	4822 117 13606	10kΩ 5% 0.01W 0402
3LM4	4822 117 11373	100Ω 1% 0805	3M4D	3198 031 08220	8.2kΩ 5% 0.5W	3P33	4822 117 11297	100kΩ 5% 0.1W
3LM5	4822 117 11373	100Ω 1% 0805	3M4E	3198 031 01820	1.8kΩ 5% 0.01W 0402	3P35	3198 031 02290	22Ω 5% 0.1W 0402
3LM6	4822 117 11373	100Ω 1% 0805	3M60	4822 117 13545	100Ω 1% 0402	3P40	4822 117 13596	220Ω 5% 0.01W 0402
3LM7	4822 117 11373	100Ω 1% 0805	3M61	4822 117 13545	100Ω 1% 0402	3P43	4822 117 13606	10kΩ 5% 0.01W 0402
3LN0	4822 117 11373	100Ω 1% 0805	3M62	4822 117 13545	100Ω 1% 0402	3P45	4822 117 13606	10kΩ 5% 0.01W 0402
3LN1	4822 117 11373	100Ω 1% 0805	3M63	4822 117 13545	100Ω 1% 0402	3P57	4822 117 13606	10kΩ 5% 0.01W 0402
3LN2	4822 117 11373	100Ω 1% 0805	3M66	3198 031 01090	10Ω 5% 0.01W 0402	3P60	2350 033 11479	4x 47Ω 5%
3LN3	4822 117 11373	100Ω 1% 0805	3M80	4822 117 13602	2.2kΩ 5% 0.01W 0402	3P61	2350 033 11479	4x 47Ω 5%
3LN4	4822 117 11373	100Ω 1% 0805	3M81	4822 117 13606	10kΩ 5% 0.01W 0402	3P62	2350 033 11479	4x 47Ω 5%
3LN5	4822 117 11373	100Ω 1% 0805	3M82	3198 031 01220	1.2kΩ 5% 0.01W 0402	3P63	2350 033 11479	4x 47Ω 5%
3LN6	4822 117 11373	100Ω 1% 0805	3M83	4822 117 13606	10kΩ 5% 0.01W 0402	3P73	3198 031 01810	180Ω 5% 0402
3LN7	4822 117 11373	100Ω 1% 0805	3M84	4822 117 13548	1kΩ 5% 0402	3P75	3198 031 04730	47Ω 5% 0402
3LQ6	4822 117 11373	100Ω 1% 0805	3M85	4822 117 10353	150Ω 1% 0.1W	3P76	4822 117 13548	1kΩ 5% 0402
3LR0	3198 031 03390	33Ω 1% 0402	3M86	4822 117 10353	150Ω 1% 0.1W	3P77	4822 117 13548	1kΩ 5% 0402
3LR1	3198 031 03390	33Ω 1% 0402	3M87	4822 117 13548	1kΩ 5% 0402	3P78	4822 117 13606	10kΩ 5% 0.01W 0402
3LR2	4822 117 13606	10kΩ 5% 0.01W 0402	3M88	4822 117 10353	150Ω 1% 0.1W	3P79	3198 031 02710	270Ω 5% 0.1W 0402
3LR3	2350 033 11339	4 x 33Ω 5%	3M89	4822 117 10353	150Ω 1% 0.1W	3P80	4822 117 13606	10kΩ 5% 0.01W 0402
3LR4	2350 033 11339	4 x 33Ω 5%	3M8A	4822 117 13548	1kΩ 5% 0402	3P81	4822 117 13602	2.2kΩ 5% 0.01W 0402
3LR5	2350 033 11339	4 x 33Ω 5%	3M8B	3198 031 01520	1.2kΩ 5% 0.01W 0402	3P82	4822 117 13606	10kΩ 5% 0.01W 0402
3LR6	2350 033 11339	4 x 33Ω 5%	3M8C	4822 117 13548	1kΩ 5% 0402	3P83	4822 117 13545	100Ω 1% 0402
3LR7	2350 033 11339	4 x 33Ω 5%	3M8D	4822 117 10353	150Ω 1% 0.1W	3P84	4822 117 13545	100Ω 1% 0402
3LR8	2350 033 11339	4 x 33Ω 5%	3M8E	4822 117 13606	10kΩ 5% 0.01W 0402	3P85	4822 117 13545	100Ω 1% 0402
3LR9	2350 033 11339	4 x 33Ω 5%	3M8F	4822 117 13606	10kΩ 5% 0.01W 0402	3P86	4822 117 13545	100Ω 1% 0402
3LS0	2350 033 11339	4 x 33Ω 5%	3M8G	4822 117 13606	10kΩ 5% 0.01W 0402	3P88	4822 117 13606	10kΩ 5% 0.01W 0402
3LS1	2350 033 11339	4 x 33Ω 5%	3M8H	4822 117 13603	33kΩ 5% 0402	3Q00	4822 117 13546	47Ω 5% 0402
3LS2	3198 031 06810	680Ω 5% 0.01W 0402	3M8I	3198 031 01830	18kΩ 5% 0.01W 0402	3Q02	2350 033 11689	4x 68Ω 5% Netw.
3LS3	4822 117 13606	10kΩ 5% 0.01W 0402	3M8J	4822 117 13548	1kΩ 5% 0402	3Q03	3198 031 04720	4.7kΩ 5% 0402
3LS4	4822 117 13606	10kΩ 5% 0.01W 0402	3M8R	4822 117 10353	150Ω 1% 0.1W	3Q04	3198 031 04720	4.7kΩ 5% 0402
3LS5	4822 117 13606	10kΩ 5% 0.01W 0402	3M8S	4822 117 10353	150Ω 1% 0.1W	3Q05	2350 033 11689	4x 68Ω 5% Netw.
3LS6	4822 117 13606	10kΩ 5% 0.01W 0402	3M8T	4822 117 10353	150Ω 1% 0.1W	3Q06	2322 705 70399	39Ω 5% 0402
3LS7	4822 117 13597	330Ω 5% 0.01W 0402	3M8U	4822 051 20478	4.7Ω 5% 0.1W	3Q07	2350 033 11689	4x 68Ω 5% Netw.
3LS8	4822 117 13606	10kΩ 5% 0.01W 0402	3M8V	4822 051 20478	4.7Ω 5% 0.1W	3Q08	2350 033 11689	4x 68Ω 5% Netw.
3LS9	3198 031 05610	560Ω 5% 0.01W 0402	3N05	3198 031 01510	150Ω 5% 0.01W 0402	3Q09	3198 031 03390	33Ω 1% 0402
3LT0	4822 117 13606	10kΩ 5% 0.01W 0402	3N06	3198 031 04720	4.7kΩ 5% 0402	3Q10	4822 117 13545	100Ω 1% 0402
3LT1	4822 117 13606	10kΩ 5% 0.01W 0402	3N07	3198 031 04720	4.7kΩ 5% 0402	3Q11	4822 117 13545	100Ω 1% 0402
3LT2	4822 117 13606	10kΩ 5% 0.01W 0402	3N08	5322 117 13028	12kΩ 1% 0.063W 0603	3Q12	4822 117 13545	100Ω 1% 0402
3LT3	3198 031 01090	10Ω 5% 0.01W 0402	3N09	4822 117 13545	10			

3Q26	2350 033 11689	4x 68Ω 5% Netw.	3U06	3198 031 02720	2.7kΩ 5% 0.01W 0402	3V78	4822 117 13548	1kΩ 5% 0402
3Q27	3198 031 04720	4.7kΩ 5% 0402	3U07	2322 706 73901	390Ω 1% 0402	3W07	4822 117 13545	100Ω 1% 0402
3Q28	2350 033 11689	4x 68Ω 5% Netw.	3U08	3198 031 04720	4.7kΩ 5% 0402	3W09	4822 117 13545	100Ω 1% 0402
3Q33	4822 117 13546	47Ω 5% 0402	3U09	2322 706 71002	1kΩ 1% 0402	3W16	4822 117 13601	22kΩ 5% 0402
3Q34	2350 033 11689	4x 68Ω 5% Netw.	3U0A	4822 117 11297	100kΩ 5% 0.1W	3W18	4822 117 13602	2.2kΩ 5% 0.01W 0402
3Q35	4822 117 13546	47Ω 5% 0402	3U0B	4822 117 13603	33kΩ 5% 0402	3W19	3198 031 03390	33Ω 1% 0402
3Q37	4822 117 13546	47Ω 5% 0402	3U0C	4822 117 13603	33kΩ 5% 0402	3W20	3198 031 03390	33Ω 1% 0402
3Q38	2350 033 11689	4x 68Ω 5% Netw.	3U0D	3198 031 04730	47Ω 5% 0402	3W21	3198 031 02720	2.7kΩ 5% 0.01W 0402
3Q39	4822 117 13546	47Ω 5% 0402	3U0E▲	5322 117 11726	10Ω 5%	3W22	3198 031 02710	270Ω 5% 0.1W 0402
3Q41	4822 117 13546	47Ω 5% 0402	3U0F	4822 117 13548	1kΩ 5% 0402	3W23	4822 117 13548	1kΩ 5% 0402
3Q43	4822 117 13546	47Ω 5% 0402	3U0G	3198 031 02720	2.7kΩ 5% 0.01W 0402	3W30	4822 117 13606	10kΩ 5% 0.01W 0402
3Q45	4822 117 13546	47Ω 5% 0402	3U0H	2322 706 75601	560Ω 1% 0402	3W31	4822 117 13606	10kΩ 5% 0.01W 0402
3Q47	4822 117 13546	47Ω 5% 0402	3U0J	2322 706 71002	1kΩ 1% 0402	3W33	4822 117 13548	1kΩ 5% 0402
3Q49	4822 117 13546	47Ω 5% 0402	3U0K	4822 117 11297	100kΩ 5% 0.1W	3W34	4822 117 11297	100kΩ 5% 0.1W
3Q51	4822 117 13546	47Ω 5% 0402	3U0L	4822 117 13603	33kΩ 5% 0402	3W52	3198 031 04730	47Ω 5% 0402
3Q53	4822 117 13546	47Ω 5% 0402	3U0M	4822 117 13603	33kΩ 5% 0402	3W68	3198 031 04720	4.7kΩ 5% 0402
3Q55	4822 117 13546	47Ω 5% 0402	3U0N	3198 031 04730	47Ω 5% 0402	3W69	3198 031 04720	4.7kΩ 5% 0402
3Q57	4822 117 13546	47Ω 5% 0402	3U0P▲	5322 117 11726	10Ω 5%	3W70	3198 031 02240	220kΩ 5% 0.1W 0402
3Q59	4822 117 13546	47Ω 5% 0402	3U0Q	4822 117 13548	1kΩ 5% 0402	3W71	4822 117 13602	2.2kΩ 5% 0.01W 0402
3Q61	4822 117 13546	47Ω 5% 0402	3U0R	3198 031 02720	2.7kΩ 5% 0.01W 0402	3W73	4822 117 13601	22kΩ 5% 0402
3Q63	4822 117 13546	47Ω 5% 0402	3U0S	2322 706 72702	2.7kΩ 1% 0402	3W74	4822 117 13548	1kΩ 5% 0402
3Q66	4822 117 13546	47Ω 5% 0402	3U0T	4822 117 13603	33kΩ 5% 0402	3W75	4822 117 13601	22kΩ 5% 0402
3Q67	4822 117 13546	47Ω 5% 0402	3U0U	2322 706 71002	1kΩ 1% 0402	3W76	3198 031 05610	560Ω 5% 0.01W 0402
3Q68	4822 117 13546	47Ω 5% 0402	3U0Z	3198 031 06820	6.8kΩ 5% 0.01W 0402	3W78	4822 117 13548	1kΩ 5% 0402
3R00	4822 117 13546	1kΩ 5% 0402	3U10	4822 117 13548	1kΩ 5% 0402	3W79	4822 117 13603	33kΩ 5% 0402
3R01	4822 117 13548	1kΩ 5% 0402	3U11	3198 031 06820	6.8kΩ 5% 0.01W 0402	3W80	4822 117 13597	330Ω 5% 0.01W 0402
3R02	4822 117 13546	47Ω 5% 0402	3U12	4822 117 13548	1kΩ 5% 0402	3W81	4822 117 13606	10kΩ 5% 0.01W 0402
3R03	4822 117 13546	47Ω 5% 0402	3U13	3198 031 06820	6.8kΩ 5% 0.01W 0402	3W82	2350 033 11689	4x 68Ω 5% Netw.
3R04	4822 117 13546	47Ω 5% 0402	3U14	4822 117 13548	1kΩ 5% 0402	3W86	2350 033 11689	4x 68Ω 5% Netw.
3R05	4822 117 13546	47Ω 5% 0402	3U15	4822 117 13545	100Ω 1% 0402	3W90	4822 117 13545	100Ω 1% 0402
3R06	4822 117 13546	47Ω 5% 0402	3U17	4822 051 30109	10Ω 5% 0.062W	3W91	2350 033 11689	4x 68Ω 5% Netw.
3R07	4822 117 13546	47Ω 5% 0402	3U18	4822 117 13613	2.2Ω 5% 0603	3W92	4822 117 13545	100Ω 1% 0402
3R08	4822 117 13546	47Ω 5% 0402	3U19	4822 051 30109	10Ω 5% 0.062W	3Z50	4822 117 13545	100Ω 1% 0402
3R09	4822 117 13546	47Ω 5% 0402	3U1A	4822 117 13613	2.2Ω 5% 0603	3Z51	4822 117 13545	100Ω 1% 0402
3R10	4822 117 13546	47Ω 5% 0402	3U1B	4822 051 30109	10Ω 5% 0.062W	9A10	4822 117 13605	Jumper 0402
3R11	4822 117 13546	47Ω 5% 0402	3U1C	4822 117 13613	2.2Ω 5% 0603	9A11	4822 117 13605	Jumper 0402
3R12	4822 117 13546	47Ω 5% 0402	3U1F	4822 051 30109	10Ω 5% 0.062W	9A12	4822 117 13605	Jumper 0402
3R13	4822 117 13546	47Ω 5% 0402	3U1G	4822 051 30109	10Ω 5% 0.062W	9A13	4822 117 13605	Jumper 0402
3R14	4822 117 13546	47Ω 5% 0402	3U1H	4822 051 30109	10Ω 5% 0.062W	9A14	4822 117 13605	Jumper 0402
3R15	4822 117 13546	47Ω 5% 0402	3U1I	4822 117 13606	10kΩ 5% 0.01W 0402	9A15	4822 117 13605	Jumper 0402
3R16	4822 117 13546	47Ω 5% 0402	3U1J	4822 117 13606	10kΩ 5% 0.01W 0402	9A23	4822 117 13605	Jumper 0402
3R17	4822 117 13546	47Ω 5% 0402	3U1K	4822 117 13606	10kΩ 5% 0.01W 0402	9A51	4822 117 13605	Jumper 0402
3R19	4822 117 13546	47Ω 5% 0402	3U1L	4822 117 13606	10kΩ 5% 0.01W 0402	9A53	4822 117 13605	Jumper 0402
3R22	4822 117 13546	47Ω 5% 0402	3U1M	4822 117 13545	100Ω 1% 0402	9A57	4822 117 13605	Jumper 0402
3R39	4822 117 13545	100Ω 1% 0402	3U1N	3198 031 01090	10Ω 5% 0.01W 0402	9B11	4822 117 13605	Jumper 0402
3R41	4822 117 13596	220Ω 5% 0.01W 0402	3U1N	3198 031 03390	33Ω 1% 0402	9B13	4822 117 13605	Jumper 0402
3R42	4822 117 13545	100Ω 1% 0402	3U1P	4822 117 13606	10kΩ 5% 0.01W 0402	9B14	4822 117 13605	Jumper 0402
3R44	4822 117 13606	10kΩ 5% 0.01W 0402	3U1Q	3198 031 01510	150Ω 5% 0.01W 0402	9B16	4822 117 13605	Jumper 0402
3R46	4822 117 13606	10kΩ 5% 0.01W 0402	3U1R	4822 117 13596	220Ω 5% 0.01W 0402	9B19	4822 117 13605	Jumper 0402
3R47	4822 117 13606	10kΩ 5% 0.01W 0402	3U1S	4822 117 13606	10kΩ 5% 0.01W 0402	9B20	4822 117 13605	Jumper 0402
3R48	3198 031 04720	4.7kΩ 5% 0402	3U1U	4822 117 13596	220Ω 5% 0.01W 0402	9B22	4822 117 13605	Jumper 0402
3R58	2350 033 11229	4x 22Ω 5% Netw.	3U1V	4822 117 13606	10kΩ 5% 0.01W 0402	9B30	3198 031 01510	150Ω 5% 0.01W 0402
3R60	2350 033 11229	4x 22Ω 5% Netw.	3U22	2322 706 76809	68Ω 1% 0402 RC32	9B30	4822 117 13605	Jumper 0402
3R62	2350 033 11229	4x 22Ω 5% Netw.	3U25	3198 021 34780	4.7Ω 5% 0603	9C03	4822 051 20008	Jumper 0805
3R64	2350 033 11229	4x 22Ω 5% Netw.	3U26	3198 021 34780	4.7Ω 5% 0603	9C08	4822 117 13605	Jumper 0402
3R66	4822 117 13545	100Ω 1% 0402	3U27	3198 021 34780	4.7Ω 5% 0603	9C51	4822 117 13605	Jumper 0402
3R67	2322 706 71002	1kΩ 1% 0402	3U2B	4822 117 13606	10kΩ 5% 0.01W 0402	9C57	4822 117 13605	Jumper 0402
3R68	2322 706 71002	1kΩ 1% 0402	3U2C	3198 031 01510	150Ω 5% 0.01W 0402	9F11	4822 117 13605	Jumper 0402
3R70	3198 031 02290	22Ω 5% 0.1W 0402	3U2D	4822 117 13545	100Ω 1% 0402	9F2F	4822 117 13605	Jumper 0402
3R71	4822 117 13546	47Ω 5% 0402	3U2E	4822 117 13545	100Ω 1% 0402	9F2G	4822 117 13605	Jumper 0402
3R72	4822 117 13546	47Ω 5% 0402	3U2F	4822 117 13545	100Ω 1% 0402	9F2H	4822 117 13605	Jumper 0402
3R73	3198 031 02290	22Ω 5% 0.1W 0402	3U2G	4822 117 13548	1kΩ 5% 0402	9F2K	4822 117 13605	Jumper 0402
3R74	3198 031 02290	22Ω 5% 0.1W 0402	3U2H	4822 117 13548	1kΩ 5% 0402	9F40	4822 117 13605	Jumper 0402
3R75	4822 117 13548	1kΩ 5% 0402	3U2J	4822 117 13601	22kΩ 5% 0402	9F41	4822 117 13546	47Ω 5% 0402
3R77	4822 117 13546	47Ω 5% 0402	3U2K	4822 117 11297	100kΩ 5% 0.1W	9F42	4822 117 13605	Jumper 0402
3R78	2350 033 11229	4x 22Ω 5% Netw.	3U2L	4822 117 13606	10kΩ 5% 0.01W 0402	9F44	4822 117 13548	1kΩ 5% 0402
3R90	3198 031 02720	2.7kΩ 5% 0.01W 0402	3U2M	4822 117 13543	10kΩ 5% 0402	9F45	4822 117 13548	1kΩ 5% 0402
3R91	2322 706 71002	1kΩ 1% 0402	3U2N	4822 117 13601	22kΩ 5% 0402	9F46	4822 117 13548	1kΩ 5% 0402
3R92	4822 117 13548	1kΩ 5% 0402	3U2P	4822 117 13601	22kΩ 5% 0402	9F47	4822 117 13548	1kΩ 5% 0402
3R93	3198 031 02720	2.7kΩ 5% 0.01W 0402	3U35	2322 705 70688	6.8Ω 5% 0402 RC31	9F51	4822 117 13605	Jumper 0402
3R94	4822 117 13548	1kΩ 5% 0402	3U48	4822 117 13545	100Ω 1% 0402	9H03	4822 117 13605	Jumper 0402
3R95	4822 117 13545	100Ω 1% 0402	3U4B	4822 117 13606	10kΩ 5% 0.01W 0402	9H05	4822 117 13605	Jumper 0402
3T04	4822 117 13545	100Ω 1% 0402	3U4C	4822 051 30339	33Ω 5% 0.062W	9H06	4822 117 13605	Jumper 0402
3T06	4822 117 13545	100Ω 1% 0402	3U4D	4822 117 13545	100Ω 1% 0402	9H07	4822 117 13605	Jumper 0402
3T07	4822 117 13545	100Ω 1% 0402	3U4E	4822 117 13602	2.2kΩ 5% 0.01W 0402	9H08	4822 117 13605	Jumper 0402
3T09	4822 117 13545	100Ω 1% 0402	3U4F	4822 117 11297	100kΩ 5% 0.1W	9H09	4822 117 13605	Jumper 0402
3T16	4822 117 13545	100Ω 1% 0402	3V00	2350 033 11229	4x 22Ω 5% Netw.	9H13	4822 117 13605	Jumper 0402
3T20	4822 117 13602	2.2kΩ 5% 0.01W 0402	3V01	2350 033 11229	4x 22Ω 5% Netw.	9H14	4822 117 13605	Jumper 0402
3T21	3198 031 02720	2.7kΩ 5% 0.01W 0402	3V13	2350 033 11229	4x 22Ω 5% Netw.	9H15	4822 117 13605	Jumper 0402
3T22	3198 031 03390	33Ω 1% 0402	3V15	2350 033 11229	4x 22Ω 5% Netw.	9H16	4822 117 13605	Jumper 0402
3T23	3198 031 02710	270Ω 5% 0.1W 0402	3V16	2350 033 11229	4x 22Ω 5% Netw.	9H18	4822 117 13605	Jumper 0402
3T24	3198 031 03390	33Ω 1% 0402	3V17	2350 033 11229	4x 22Ω 5% Netw.	9H19	4822 117 13605	Jumper 0402
3T25	4822 117 13603	33kΩ 5% 0402	3V18	2350 033 11229	4x 22Ω 5% Netw.	9H21	4822 117 13605	Jumper 0402
3T27	4822 117 13606	10kΩ 5% 0.01W 0402	3V19	2350 033 11229	4x 22Ω 5% Netw.	9H26	4822 117 13605	Jumper 0402
3T28	4822 117 13602	2.2kΩ 5% 0.01W 0402	3V24	2322 706 75601	560Ω 1% 0402	9H27	4822 117 13605	Jumper 0402
3T29	4822 117 13601	22kΩ 5% 0402	3V25	2322 706 75601	560Ω 1% 0402	9H29	4822 117 13605	Jumper 0402
3T68	3198 031 04720	4.7kΩ 5% 0402	3V40	3198 031 02290	22Ω 5% 0.1W 0402	9H30	4822 117 13605	Jumper 0402
3T69	3198 031 04720	4.7kΩ 5% 0402	3V41	3198 031 02290	22Ω 5% 0.1W 0402	9H32	4822	

9I32	4822 117 13605 Jumper 0402	9R06	4822 117 13605 Jumper 0402	5D25	2422 549 44197 Bead 220Ω at 100MHz
9I33	4822 117 13605 Jumper 0402	9T05	4822 117 13605 Jumper 0402	5D26	2422 549 44197 Bead 220Ω at 100MHz
9I51	4822 117 13605 Jumper 0402	9T06	4822 117 13605 Jumper 0402	5D27	2422 549 44197 Bead 220Ω at 100MHz
9I52	4822 117 13605 Jumper 0402	9T07	4822 117 13605 Jumper 0402	5F00	2422 549 45325 Bead 67Ω at 100MHz
9I53	4822 117 13605 Jumper 0402	9T23	4822 117 13605 Jumper 0402	5F01	2422 549 45325 Bead 67Ω at 100MHz
9J20	4822 117 13605 Jumper 0402	9T24	4822 117 13605 Jumper 0402	5F02	2422 549 45325 Bead 67Ω at 100MHz
9J21	4822 117 13605 Jumper 0402	9T25	4822 117 13605 Jumper 0402	5F03	2422 549 45325 Bead 67Ω at 100MHz
9J22	4822 117 13605 Jumper 0402	9T40	4822 117 13605 Jumper 0402	5F04	2422 549 45325 Bead 67Ω at 100MHz
9J24	4822 117 13605 Jumper 0402	9T73	4822 117 13605 Jumper 0402	5F06	2422 549 45325 Bead 67Ω at 100MHz
9K01	4822 117 13605 Jumper 0402	9U01	4822 117 13605 Jumper 0402	5F07	2422 549 45325 Bead 67Ω at 100MHz
9L04	4822 117 13605 Jumper 0402	9U02	4822 117 13605 Jumper 0402	5F08	2422 549 45325 Bead 67Ω at 100MHz
9L07	4822 117 13605 Jumper 0402	9U03	4822 117 13605 Jumper 0402	5F09	2422 549 45325 Bead 67Ω at 100MHz
9L08	4822 117 13605 Jumper 0402	9U09	4822 117 13548 1kΩ 5% 0402	5F0B	2422 549 45325 Bead 67Ω at 100MHz
9L09	4822 117 13605 Jumper 0402	9U10	4822 051 20008 Jumper 0805	5F0I	2422 549 42896 Bead 120Ω 100MHz
9L10	4822 117 13605 Jumper 0402	9U11	4822 051 20008 Jumper 0805	5F0L	2422 549 00287 Bead 220Ω 100MHz
9LA0	4822 117 13605 Jumper 0402	9U12	4822 051 20008 Jumper 0805	5F0M	2422 549 00287 Bead 220Ω 100MHz
9LA1	4822 117 13605 Jumper 0402	9U40	4822 051 20008 Jumper 0805	5F0N	2422 549 00287 Bead 220Ω 100MHz
9LC7	4822 117 13605 Jumper 0402	9U41	4822 051 20008 Jumper 0805	5F0P	2422 549 42896 Bead 120Ω 100MHz
9M00	4822 117 13605 Jumper 0402	9W03	4822 117 13605 Jumper 0402	5F0Q	2422 549 00287 Bead 220Ω 100MHz
9M01	4822 117 13605 Jumper 0402	9W05	4822 117 13605 Jumper 0402	5F0R	2422 549 43062 Bead 600Ω at 100MHz
9M02	4822 117 13605 Jumper 0402	9W08	4822 117 13605 Jumper 0402	5F0S	2422 549 43062 Bead 600Ω at 100MHz
9M03	4822 117 13605 Jumper 0402	9W12	4822 117 13605 Jumper 0402	5F10	2422 549 00287 Bead 220Ω 100MHz
9M04	4822 117 13605 Jumper 0402	9W14	4822 117 13605 Jumper 0402	5F11	2422 549 00287 Bead 220Ω 100MHz
9M05	4822 117 13605 Jumper 0402	9W15	4822 117 13605 Jumper 0402	5F60	2422 549 42896 Bead 120Ω 100MHz
9M0L	4822 117 13605 Jumper 0402	9W16	4822 117 13605 Jumper 0402	5F61	2422 549 42896 Bead 120Ω 100MHz
9M48	4822 117 13605 Jumper 0402	9W17	4822 117 13605 Jumper 0402	5F62	2422 549 42896 Bead 120Ω 100MHz
9M4L	4822 117 13605 Jumper 0402	9W18	4822 117 13605 Jumper 0402	5I01	2422 549 42896 Bead 120Ω 100MHz
9M4M	4822 117 13605 Jumper 0402	9W19	4822 117 13605 Jumper 0402	5I21	2422 549 42896 Bead 120Ω 100MHz
9M4N	4822 117 13605 Jumper 0402	9W23	4822 117 13605 Jumper 0402	5I50	4822 157 11716 Bead 30Ω at 100MHz
9M4P	4822 117 13605 Jumper 0402	9W24	4822 117 13605 Jumper 0402	5I51	4822 157 11716 Bead 30Ω at 100MHz
9M4Q	4822 117 13605 Jumper 0402	9W33	4822 117 13605 Jumper 0402	5J00	2422 549 42896 Bead 120Ω 100MHz
9M4R	4822 117 13605 Jumper 0402	9W34	4822 117 13605 Jumper 0402	5J01	2422 549 42896 Bead 120Ω 100MHz
9M4S	4822 117 13605 Jumper 0402	9W36	4822 117 13605 Jumper 0402	5J02	2422 549 42896 Bead 120Ω 100MHz
9M4T	4822 117 13605 Jumper 0402	9W37	4822 117 13605 Jumper 0402	5J03	2422 549 42896 Bead 120Ω 100MHz
9M4U	4822 117 13605 Jumper 0402	9W39	4822 117 13605 Jumper 0402	5J04	2422 549 42896 Bead 120Ω 100MHz
9M4V	4822 117 13605 Jumper 0402	9W41	4822 117 13605 Jumper 0402	5J05	2422 549 42896

5T02	2422 549 44197	Bead 220Ω at 100MHz	6M80	4822 130 11397	BAS316	7F65	9322 230 41668	XC3S250E-4FTG256C
5T03	2422 549 44197	Bead 220Ω at 100MHz	6M81	4822 130 11397	BAS316	7I03	9351 875 80118	74HCU04PW
5T05	3198 018 31080	1μH 10% 0805	6O00	4822 130 11397	BAS316	7I21	9340 425 20115	BC847BS
5T12	2422 549 45843	100 Mhz 0603	6O01	4822 130 11397	BAS316	7I50	9322 215 17668	M24C01-WMN6P
5U00	2422 536 00671	10μH 20%	6P00	4822 130 11397	BAS316	7I60	3198 010 44350	BC807-25W
5U01	2422 536 00671	10μH 20%	6P10	4822 130 11397	BAS316	7I61	9340 425 30115	BC847BPN
5U02	2422 536 00779	10μH 20%	6P11	4822 130 11397	BAS316	7I62	9340 219 30115	BC817-25W
5U03	2422 536 00779	10μH 20%	6T01	9322 208 84685	BZG05C33	7I80	9340 425 30115	BC847BPN
5U04	2422 536 00779	10μH 20%	6U00	4822 130 11397	BAS316	7I81	3198 010 44350	BC807-25W
5U05	2422 549 44197	Bead 220Ω at 100MHz	6U01	4822 130 11397	BAS316	7I82	9340 219 30115	BC817-25W
5U06	2422 549 44197	Bead 220Ω at 100MHz	6U02	4822 130 11397	BAS316	7I83	3198 010 42320	BC857BW
5U07	2422 549 44197	Bead 220Ω at 100MHz	6U07	4822 130 11397	BAS316	7I84	9340 425 30115	BC847BPN
5U08	2422 549 44197	Bead 220Ω at 100MHz	6U08	4822 130 11397	BAS316	7J00	9352 806 64557	PNX2015E/M1E02
5U09	2422 549 44197	Bead 220Ω at 100MHz	6U09	4822 130 11397	BAS316	7J00	9352 815 51557	PNX2015E/M2B02
5U0A	2422 549 44197	Bead 220Ω at 100MHz	6U0B	9322 134 46685	SML-310MT	7J01	9340 425 30115	BC847BPN
5U0B	2422 549 44197	Bead 220Ω at 100MHz	6U0C	9322 134 46685	SML-310MT	7J02	9340 425 30115	BC847BPN
5U0C	2422 549 44197	Bead 220Ω at 100MHz	6U0D	9322 134 46685	SML-310MT	7J08	9322 211 75685	SN74LVC1G126DCK
5U0D	2422 536 00671	10μH 20%	6U0E	9322 134 46685	SML-310MT	7L50	9322 204 09671	K4D261638F-LC40
5U40	2422 536 00532	220μH 20%	6U12	9322 165 17668	STPS2L30A	7L50	9322 228 07671	K4D261638L-LC50
5V01	2422 549 44197	Bead 220Ω at 100MHz	6U13	4822 130 11416	PDZ6.8B	7L51	3198 010 42320	BC857BW
5V02	2422 549 44197	Bead 220Ω at 100MHz	6U40	4822 130 11397	BAS316	7L52	9322 206 22668	M24C64-WDW6P
5W04	2422 549 44197	Bead 220Ω at 100MHz	6U43	9340 548 69115	PDZ27B	7LA1	9322 204 63685	NCP303LSN10
5W08	4822 157 71206	Bead 600Ω 100MHz				7LA2	9340 425 30115	BC847BPN
5W12	2422 549 43769	Bead 30Ω at 100MHz				7LA3	9340 425 30115	BC847BPN
5W14	3198 018 90050	Bead 1kΩ at 100MHz				7LA7		For SW see item 0802
5W15	3198 018 31080	1μH 10% 0805	7A00	9352 767 55557	PNX3000HL/N3	7LB0	9322 204 63685	NCP303LSN10
5W15	3198 018 33370	0.33μH 10% 0805	7A01	9340 425 30115	BC847BPN	7LB1	9322 204 63685	NCP303LSN10
5Z01	4822 051 30759	75Ω 5% 0.062W	7A03	9322 185 74668	LM324P	7LB2	9322 204 63685	NCP303LSN10
5Z50	2422 549 43769	Bead 30Ω at 100MHz	7A04	9322 187 67668	TS482IS	7LB3	9322 204 63685	NCP303LSN10
			7A54	3198 010 42310	BC847BW	7LB4	9322 204 63685	NCP303LSN10
			7A55	3198 010 42310	BC847BW	7LB5	5322 130 60159	BC846B
			7B02		For SW see item 0802	7LB6	3198 010 44310	PDTC114EU
			7B03		For SW see item 0802	7LB7	3198 010 44310	PDTC114EU
			7B06	4822 209 17398	LD1117DT33	7LB8	9340 560 35235	BSH112
			7B11	9352 798 11557	TDA9975EL/8/C2	7LB9	9340 560 35235	BSH112
			7B12	9322 213 50685	TS431AIL	7M40	9340 425 30115	BC847BPN
			7B13	4822 130 42804	BC817-25	7M41	5322 130 60159	BC846B
			7B30	3198 010 42310	BC847BW	7M80	9322 204 63685	NCP303LSN10
			7B31	3198 010 42310	BC847BW	7M81	3198 010 44310	PDTC114EU
			7C00	9352 767 55557	PNX3000HL/N3	7M82	9322 213 50685	TS431AIL
			7C01	9340 425 30115	BC847BPN	7M83	5322 130 60159	BC846B
			7C02	3198 010 42310	BC847BW	7M84	9322 213 50685	TS431AIL
			7C05	9322 198 11685	L78L08ACU	7M85	5322 130 60159	BC846B
			7C31	3198 010 42310	BC847BW	7M86	5322 130 60159	BC846B
			7C54	3198 010 42310	BC847BW	7M87	5322 130 60159	BC846B
			7C55	3198 010 42310	BC847BW	7M88	5322 130 60159	BC846B
			7D09	3198 010 42310	BC847BW	7M8B	5322 130 60159	BC846B
			7D10	9322 213 35668	LM339P	7N00	9352 698 49518	ISP1561BM
			7D11	9340 425 20115	BC847BS	7O00	9322 191 29671	DP83816AVNG
			7D12	9340 425 20115	BC847BS	7P00	9322 173 43668	TPS2211AIDB
			7D14	3198 010 42310	BC847BW	7P03	9322 160 60668	STV0701
			7D15	3198 010 44350	BC807-25W	7P15	9351 750 00118	74HC4066PW
			7D16	9340 425 30115	BC847BPN	7P16	3198 010 44310	PDTC114EU
			7D17	9340 219 30115	BC817-25W	7P17	3198 010 44310	PDTC114EU
			7D18	9322 224 40668	FET FDS4559_NL	7P20	3198 010 44310	PDTC114EU
			7D19	3198 010 42310	BC847BW	7P21	3198 010 44310	PDTC114EU
			7D20	3198 010 44350	BC807-25W	7P22	3198 010 44310	PDTC114EU
			7D21	9340 425 30115	BC847BPN	7P23	3198 010 44310	PDTC114EU
			7D22	9340 219 30115	BC817-25W	7P31	9352 190 20118	74LVC573APW
			7D23	9322 224 40668	FET FDS4559_NL	7P32	9352 190 20118	74LVC573APW
			7D25	9340 425 30115	BC847BPN	7P34	9352 115 40118	74LVC245APW
			7D26	9340 425 30115	BC847BPN	7P76	9352 115 40118	74LVC245APW
			7D30	3198 010 42320	BC857BW	7P77	9352 115 40118	74LVC245APW
			7D31	3198 010 42320	BC857BW	7P80		For SW see item 0802
			7D33	9322 185 74668	LM324P	7P81	9352 115 40118	74LVC245APW
			7D40	9322 213 18668	LM393PW	7R00	9322 223 87671	T6TE0TBG-0001
			7D44	3198 010 42310	BC847BW	7R01	9322 214 25671	IC K4H561638F-UCB3
			7D45	3198 010 44350	BC807-25W	7R04	3198 010 42310	BC847BW
			7D46	9340 425 30115	BC847BPN	7R10	9322 213 50685	TS431AIL
			7D47	9340 219 30115	BC817-25W	7R11	9340 575 87118	PHD38N02LT
			7D48	9322 224 40668	FET FDS4559_NL	7R12	9340 425 30115	BC847BPN
			7D49	3198 010 42310	BC847BW	7T01	9322 104 47668	L78M05CDT
			7D50	3198 010 44350	BC807-25W	7T02	9322 104 47668	L78M05CDT
			7D51	9340 425 30115	BC847BPN	7T10	3198 010 42310	BC847BW
			7D52	9340 219 30115	BC817-25W	7T11	5322 130 42718	BFS20
			7D53	9322 224 40668	FET FDS4559_NL	7U01	9322 160 70668	SI4936ADY
			7D60	3198 010 42320	BC857BW	7U02	9322 160 70668	SI4936ADY
			7D62	3198 010 42320	BC857BW	7U03	9322 160 70668	SI4936ADY
			7F01	9322 215 24668	LD1117DT12	7U04	9322 182 77668	L6910
			7F02	9340 425 20115	BC847BS	7U05	9322 182 77668	L6910
			7F05	9322 204 10685	SI3441BDV	7U06	9322 182 77668	L6910
			7F06	3198 010 42310	BC847BW	7U08	9340 425 20115	BC847BS
			7F08	9340 425 30115	BC847BPN	7U09	9340 425 20115	BC847BS
			7F09	9340 425 20115	BC847BS	7U10	9340 425 20115	BC847BS
			7F12	3198 010 42310	BC847BW	7U20	9340 425 30115	BC847BPN
			7F13	9322 206 45668	M25P05-AVMN6P	7U21	9340 425 10115	BC857BS
			7F14	9322 213 42685	LD3985M25	7U23	3198 010 42310	BC847BW
			7F16	9322 230 98671	PACIFIC3-N3(O)	7U40	9340 560 35235	BSH112
			7F17	9322 144 97668	LD1117DT	7U41	3198 010 42310	BC847BW
			7F20	9352 711 46118	P87LPC760BDH	7V00	9352 800 63557	PNX8550EH/M2/S1
			7F60	9322 220 39668	XCF02SVOG20C	7V01	9322 225 58671	K4H511638C-UCCC
			7F62	3198 010 42310	BC847BW	7V02	9322 225 58671	K4H511638C-UCCC
			7F64	3198 010 44310	PDTC114EU	7V10	3198 010 44310	PDTC114EU
						7W10	3198 010 42310	BC847BW

7W11	5322 130 42718	BFS20
7W13	9352 684 56115	74LVC1G04GW
7W14	9322 217 28668	LD1117DT18
7W17	9352 732 45557	TDA1004AHT/C1
7W18	9340 425 30115	BC847BPN
7W19	9340 425 30115	BC847BPN
7Z11	9352 115 40118	74LVC245APW
7Z12	9352 115 40118	74LVC245APW

Externals [BE]

Various

1E50	2422 025 17601	Connector 40p f
1I01▲	2422 025 19472	Sock. SCART 21p f Bk
1I02▲	2422 025 19472	Sock. SCART 21p f Bk

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2O01	2020 552 94427	100pF 5% 50V
2O02	4822 126 13879	220nF +80-20% 16V
2O03	2238 586 59812	100nF 20% 50V 0603
2O06	2020 552 94427	100pF 5% 50V
2O07	2020 004 90283	10μF 20% 10V 1206
2O08	2020 004 90283	10μF 20% 10V 1206
2O09	2238 586 59812	100nF 20% 50V 0603
2O10	2020 552 94427	100pF 5% 50V
2O11	2020 004 90283	10μF 20% 10V 1206
2O12	2238 586 59812	100nF 20% 50V 0603
2O14	2238 586 59812	100nF 20% 50V 0603
2O15	2238 586 59812	100nF 20% 50V 0603
2O16	2020 552 94427	100pF 5% 50V
2O17	2238 586 59812	100nF 20% 50V 0603
2O18	4822 126 14241	330pF 0603 50V
2O23	2238 586 59812	100nF 20% 50V 0603
2O24	4822 124 12095	100μF 20% 16V
2O25	4822 126 14585	100nF 10% 0805 50V
2O26	2022 552 05679	1μF 10% 16V 0805
2O29	2020 552 94427	100pF 5% 50V
2O30	2020 552 94427	100pF 5% 50V
2O31	2020 552 94427	100pF 5% 50V
2O32	2020 552 94427	100pF 5% 50V
2O33	4822 126 14241	330pF 0603 50V
2O35	2238 586 59812	100nF 20% 50V 0603
2O36	2238 586 59812	100nF 20% 50V 0603
2O37	2238 586 59812	100nF 20% 50V 0603
2O38	2238 586 59812	100nF 20% 50V 0603
2O39	2020 004 90283	10μF 20% 10V 1206
2O40	4822 124 23002	10μF 16V
2O42	4822 124 23002	10μF 16V
2O44	4822 124 23002	10μF 16V
2O46	4822 124 23002	10μF 16V
2O52	4822 124 12313	22μF 10V 20%
2O53	2238 586 59812	100nF 20% 50V 0603
2O54	2238 586 59812	100nF 20% 50V 0603
2O55	2020 004 90283	10μF 20% 10V 1206
2O56	2238 586 59812	100nF 20% 50V 0603
2O57	2020 004 90283	10μF 20% 10V 1206
2O58	2238 586 59812	100nF 20% 50V 0603
2O59	2020 004 90283	10μF 20% 10V 1206

—WW—

3999	4822 051 30101	100Ω 5% 0.062W
3I01	4822 051 30101	100Ω 5% 0.062W
3I02	4822 051 30102	1kΩ 5% 0.062W
3I03	4822 051 30223	22kΩ 5% 0.062W
3I04	4822 051 30102	1kΩ 5% 0.062W
3I05	4822 051 30102	1kΩ 5% 0.062W
3I06	4822 051 30223	22kΩ 5% 0.062W
3I07	4822 051 30102	1kΩ 5% 0.062W
3I08	4822 051 30109	10Ω 5% 0.062W
3I09	4822 051 30109	10Ω 5% 0.062W
3I10	4822 051 30109	10Ω 5% 0.062W
3O01	4822 051 30101	100Ω 5% 0.062W
3O02	4822 051 30561	560Ω 5% 0.062W
3O03	4822 051 30391	390Ω 5% 0.062W
3O04	4822 051 30223	22kΩ 5% 0.062W
3O05	4822 051 30223	22kΩ 5% 0.062W
3O06	4822 051 30689	68Ω 5% 0.063W 0603
3O07	4822 051 30101	100Ω 5% 0.062W
3O08	4822 051 30472	4.7Ω 5% 0.062W
3O09	4822 051 30223	22kΩ 5% 0.062W
3O10	4822 051 30223	22kΩ 5% 0.062W
3O11	4822 051 30101	100Ω 5% 0.062W
3O12	4822 117 13632	100kΩ 1% 0603 0.62W
3O13	4822 117 12925	47kΩ 1% 0.063W 0603
3O14	4822 051 30101	100Ω 5% 0.062W
3O15	4822 051 30101	100Ω 5% 0.062W
3O16	3198 021 38220	8.2kΩ 5% 0.062W 0603
3O17	4822 051 30332	3.3Ω 5% 0.062W

3O18	4822 117 13632	100kΩ 1% 0603 0.62W
3O19	4822 051 30101	100Ω 5% 0.062W
3O20	4822 117 12925	47kΩ 1% 0.063W 0603
3O21	4822 117 13632	100kΩ 1% 0603 0.62W
3O22	4822 117 13632	100kΩ 1% 0603 0.62W
3O23	4822 051 30102	1kΩ 5% 0.062W
3O24	4822 117 13632	100kΩ 1% 0603 0.62W
3O25	4822 051 30223	22kΩ 5% 0.062W
3O26	4822 051 30101	100Ω 5% 0.062W
3O27	4822 117 13632	100kΩ 1% 0603 0.62W
3O28	4822 051 30759	75Ω 5% 0.062W
3O29	4822 051 30223	22kΩ 5% 0.062W
3O30	4822 117 13632	100kΩ 1% 0603 0.62W
3O31	3198 021 38220	8.2kΩ 5% 0.062W 0603
3O32	4822 051 30332	3.3Ω 5% 0.062W
3O33	4822 051 30223	22kΩ 5% 0.062W
3O34	4822 117 13632	100kΩ 1% 0603 0.62W
3O35	4822 051 30101	100Ω 5% 0.062W
3O36	4822 051 30101	100Ω 5% 0.062W
3O37	4822 051 30681	680Ω 5% 0.062W
3O38	4822 051 30759	75Ω 5% 0.062W
3O40	4822 051 30101	100Ω 5% 0.062W
3O41	4822 051 30101	100Ω 5% 0.062W
3O42	4822 051 30101	100Ω 5% 0.062W
3O43	4822 051 30759	75Ω 5% 0.062W
3O44	4822 051 30101	100Ω 5% 0.062W
3O45	4822 051 30689	68Ω 5% 0.063W 0603
3O46	4822 051 30101	100Ω 5% 0.062W
3O47	4822 051 30101	100Ω 5% 0.062W
3O48	4822 051 30102	1kΩ 5% 0.062W
3O49▲	4822 117 11151	1Ω 5%
3O51	4822 051 30759	75Ω 5% 0.062W
3O52	4822 051 30689	68Ω 5% 0.063W 0603
3O54	4822 051 30759	75Ω 5% 0.062W
3O55	4822 051 30759	75Ω 5% 0.062W
3O57	4822 051 30101	100Ω 5% 0.062W
3O59	4822 051 30759	75Ω 5% 0.062W
3O60	4822 051 30102	1kΩ 5% 0.062W
3O61	4822 051 30759	75Ω 5% 0.062W
3O62	4822 051 30759	75Ω 5% 0.062W
3O63	4822 051 30101	100Ω 5% 0.062W
3O64	4822 051 30101	100Ω 5% 0.062W
3O65	4822 051 30223	22kΩ 5% 0.062W
3O66	4822 051 30101	100Ω 5% 0.062W
3O67	4822 051 30101	100Ω 5% 0.062W
3O68	4822 051 30101	100Ω 5% 0.062W
3O70	4822 051 30101	100Ω 5% 0.062W
3O72	4822 051 30101	100Ω 5% 0.062W
3O74	4822 051 30101	100Ω 5% 0.062W
3O75	4822 051 30102	1kΩ 5% 0.062W
3O76	4822 051 30101	100Ω 5% 0.062W
3O77	4822 051 30102	1kΩ 5% 0.062W
3O78	4822 051 30101	100Ω 5% 0.062W
3O79	4822 051 30102	1kΩ 5% 0.062W
3O80	4822 051 30102	1kΩ 5% 0.062W
3O81	4822 051 30102	1kΩ 5% 0.062W
3O82	4822 051 30151	150Ω 5% 0.062W
3O83	4822 051 30102	1kΩ 5% 0.062W
3O91	4822 051 30151	150Ω 5% 0.062W
3O93	4822 051 30102	1kΩ 5% 0.062W
3O95	4822 051 30151	150Ω 5% 0.062W
3O97	4822 051 30151	150Ω 5% 0.062W

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5O00	4822 157 11716	Bead 30Ω at 100MHz
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6O01	4822 130 11416	PDZ6.8B
6O02	9322 129 41685	BZM55-C12
6O03	4822 130 11416	PDZ6.8B
6O04	4822 130 11416	PDZ6.8B
6O05	4822 130 11397	BAS316
6O06	4822 130 11397	BAS316
6O07	4822 130 11416	PDZ6.8B
6O08	4822 130 11416	PDZ6.8B
6O09	4822 130 11416	PDZ6.8B
6O10	4822 130 11416	PDZ6.8B
6O11	4822 130 11416	PDZ6.8B
6O12	4822 130 11416	PDZ6.8B
6O13	4822 130 11416	PDZ6.8B
6O14	4822 130 11416	PDZ6.8B
6O15	4822 130 11416	PDZ6.8B
6O16	4822 130 11416	PDZ6.8B
6O17	4822 130 11416	PDZ6.8B
6O18	4822 130 11397	BAS316
6O19	4822 130 11416	PDZ6.8B
6O20	4822 130 11416	PDZ6.8B
6O21	4822 130 11416	PDZ6.8B
6O22	9322 129 41685	BZM55-C12
6O24	4822 130 11416	PDZ6.8B

6O25	4822 130 11416	PDZ6.8B
6O27	4822 130 11416	PDZ6.8B
6O29	4822 130 11416	PDZ6.8B
6O30	4822 130 11416	PDZ6.8B
6O31	4822 130 11416	PDZ6.8B
6O32	4822 130 11416	PDZ6.8B
6O33	4822 130 11416	PDZ6.8B
6O34	4822 130 11416	PDZ6.8B
6O35	4822 130 11416	PDZ6.8B
6O36	4822 130 11416	PDZ6.8B
6O37	4822 130 11416	PDZ6.8B
6O38	9322 102 64685	UDZ2.7B



7O00	9351 869 40118	74HC4053PW
7O01	3198 010 42310	BC847BW
7O02	3198 010 42310	BC847BW
7O03	3198 010 42310	BC847BW
7O04	3198 010 42310	BC847BW
7O05	3198 010 42310	BC847BW
7O06	3198 010 42310	BC847BW
7O07	3198 010 42310	BC847BW
7O08	3198 010 42310	BC847BW
7O09	3198 010 42310	BC847BW
7O10	9351 869 40118	74HC4053PW
7O11	3198 010 42310	BC847BW
7O12	3198 010 42310	BC847BW
7O13	3198 010 42310	BC847BW
7O15	3198 010 42310	BC847BW
7O21	9340 425 20115	BC847BS
7O24	3198 010 42310	BC847BW
7O25	3198 010 42310	BC847BW

Side I/O [D]

Various

1001	2422 026 05133	Connector SVHS 4p f
1002	2422 026 05807	Sckt Cinch 3p f YeWhRd
1010	4822 267 31014	Sckt headphone
1301	4822 267 10484	YKF51-5359
1302	2422 026 05808	Cinch 3p f Ye
1303	2422 026 05059	Connector Phone
1304	2422 025 10655	Connector 11p m
1308	2422 025 18984	Sock. USB 4p f 2/2.5
1309	2422 025 09406	Connector 4p m
1310	2422 025 10768	Connector 3p m
1M36	2422 025 10655	Connector 11p m

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2301	4822 126 11785	47pF 5% 50V 0603
2302	4822 126 11785	47pF 5% 50V 0603
2303	4822 122 33761	22pF 5% 50V
2304	4822 126 11785	47pF 5% 50V 0603
2305	2020 552 94427	100pF 5% 50V
2306	2020 552 94427	100pF 5% 50V
2307	2238 916 15641	22nF 10% 25V 0603
2308	2238 916 15641	22nF 10% 25V 0603
2309	5322 126 11583	10nF 10% 50V 0603
2310	5322 126 11583	10nF 10% 50V 0603
2311	4822 122 33761	22pF 5% 50V
2312	2020 004 90297	100μF 20% 16V
2903	2020 552 94427	100pF 5% 50V
2904	2020 552 94427	100pF 5% 50V
2905	2238 916 15641	22nF 10% 25V 0603
2906	2238 916 15641	22nF 10% 25V 0603
2907	4822 126 14249	560pF 10% 50V 0603
2908	4822 126 14249	560pF 10% 50V 0603

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3301	4822 051 30759	75Ω 5% 0.062W
3302	4822 051 30759	75Ω 5% 0.062W
3303	4822 051 30109	10Ω 5% 0.062W
3304	4822 051 30101	100Ω 5% 0.062W
3305	4822 051 30109	10Ω 5% 0.062W
3306	4822 051 30101	100Ω 5% 0.062W
3307	4822 051 30101	100Ω 5% 0.062W
3308	4822 051 30101	100Ω 5% 0.062W
3309	4822 117 13632	100kΩ 1% 0603 0.62W
3310	4822 051 30101	100Ω 5% 0.062W
3311	4822 117 13632	100kΩ 1% 0603 0

3907	4822 051 30333	33kΩ 5% 0.062W
3908	4822 051 30102	1kΩ 5% 0.062W
3909	4822 051 30333	33kΩ 5% 0.062W
3910	4822 051 30392	3.9Ω 5% 0.063W 0603
3911	4822 051 30103	10kΩ 5% 0.062W
3912	4822 051 30103	10kΩ 5% 0.062W
3999	4822 051 30102	1kΩ 5% 0.062W



5300	2422 549 44197	Bead 220Ω at 100MHz
5301	4822 051 20008	Jumper 0805
5302	4822 051 20008	Jumper 0805



6301	9322 146 61685	DF3A6.8FU
6302	9322 146 61685	DF3A6.8FU
6303	9322 146 61685	DF3A6.8FU
6304	9322 146 61685	DF3A6.8FU
6305	9322 146 61685	DF3A6.8FU
6306	9322 146 61685	DF3A6.8FU
6307	9322 146 61685	DF3A6.8FU
6900	4822 130 11416	PDZ6.8B
6901	4822 130 11416	PDZ6.8B
6902	4822 130 11416	PDZ6.8B
6903	4822 130 11416	PDZ6.8B
6904	4822 130 11416	PDZ6.8B
6905	4822 130 11416	PDZ6.8B
6906	4822 130 11416	PDZ6.8B
6907	4822 130 11416	PDZ6.8B
6908	4822 130 11416	PDZ6.8B
6909	4822 130 11416	PDZ6.8B
6910	4822 130 11416	PDZ6.8B
6911	4822 130 11416	PDZ6.8B

Control Panel [E]

Various

1309	4822 276 13775	Switch 1p 0.1A 12V
1310	4822 276 13775	Switch 1p 0.1A 12V
1311	4822 276 13775	Switch 1p 0.1A 12V
1312	4822 276 13775	Switch 1p 0.1A 12V
1313	4822 276 13775	Switch 1p 0.1A 12V
1314	4822 276 13775	Switch 1p 0.1A 12V
1684	4822 267 10459	Connector 3p
1701	4822 276 13775	Switch 1p 0.1A 12V
1702	4822 276 13775	Switch 1p 0.1A 12V
1703	4822 276 13775	Switch 1p 0.1A 12V
1704	4822 276 13775	Switch 1p 0.1A 12V
1705	4822 276 13775	Switch 1p 0.1A 12V
1706	4822 276 13775	Switch 1p 0.1A 12V
1M01	4822 267 10459	Connector 3p
8101	3104 311 06551	Cable 3p/1300/3p



3002	4822 051 30151	150Ω 5% 0.062W
3003	4822 051 30391	390Ω 5% 0.062W
3004	4822 051 30561	560Ω 5% 0.062W
3005	3198 021 31820	1.8kΩ 5% 0.062W 0603
3006	4822 117 12968	820Ω 5% 0.62W
3318	4822 051 30621	620R00 5% 0.062W
3319	2322 702 60112	1.1kΩ 5% 0603
3320	2322 702 60201	200Ω 5% 0603
3321	4822 051 30391	390Ω 5% 0.062W
3324	2322 702 60202	2kΩ 5% 0603
3999	4822 117 12968	820Ω 5% 0.62W



6306	4822 130 11416	PDZ6.8B
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IR/LED [J]

Various

1040	9322 223 97668	TSOP36236 IR
1870	4822 265 31067	Connector 7p m
1M21	2422 025 18753	Connector 6p m



2040	4822 124 12095	100μF 20% 16V
2070	4822 124 12095	100μF 20% 16V
2801	2020 552 96637	10μF 10% 6.3V 0805
2802	2020 552 96637	10μF 10% 6.3V 0805



3040	4822 117 13597	330Ω 5% 0.01W 0402
3041	4822 117 13606	10kΩ 5% 0.01W 0402
3042	3198 031 06820	6.8kΩ 5% 0.01W 0402
3051	4822 117 13597	330Ω 5% 0.01W 0402
3053	4822 117 13606	10kΩ 5% 0.01W 0402
3055	4822 117 13606	10kΩ 5% 0.01W 0402
3058	4822 117 13606	10kΩ 5% 0.01W 0402
3059	4822 117 13606	10kΩ 5% 0.01W 0402
3061	4822 117 13597	330Ω 5% 0.01W 0402
3063	4822 117 13606	10kΩ 5% 0.01W 0402
3065	4822 117 13606	10kΩ 5% 0.01W 0402
3068	4822 117 13606	10kΩ 5% 0.01W 0402
3069	4822 117 13606	10kΩ 5% 0.01W 0402
3071	4822 117 13603	33kΩ 5% 0402
3072	4822 117 13606	10kΩ 5% 0.01W 0402
3074	4822 117 13606	10kΩ 5% 0.01W 0402
3077	4822 117 13606	10kΩ 5% 0.01W 0402
3079	2322 705 70475	4.7MΩ 5% 0402
3802	4822 051 30151	150Ω 5% 0.062W
3803	4822 051 30221	220Ω 5% 0.062W
3804	4822 051 30151	150Ω 5% 0.062W
3805	3198 021 31080	1Ω 5% 0603
3809	3198 021 32250	2.2MΩ 5% 0603
3810	3198 021 32250	2.2MΩ 5% 0603
3999	4822 117 13606	10kΩ 5% 0.01W 0402
9120	4822 117 13605	Jumper 0402
9121	4822 117 13605	Jumper 0402



6051	4822 130 83915	TLMV3100
6801	9322 192 35676	SPR-325MVV
6809	4822 130 11564	UDZ3.9B



7051	3198 010 42310	BC847BW
7052	4822 130 60373	BC856B
7061	3198 010 42310	BC847BW
7062	4822 130 60373	BC856B
7070	9322 218 83685	TEMT6000
7071	3198 010 42310	BC847BW
7802	9322 207 16667	TSOP34836LL1B
7803	5322 130 60159	BC846B
7805	5322 130 60159	BC846B

Standby Audio Supply [SA]

Various

1305	4822 267 10735	Connector 3p
1306▲	2422 025 16374	Connector 2p m
1318	2422 025 08149	Connector 6p m
1M03	2422 025 10771	Connector 10p m
1M46	2422 025 10655	Connector 11p m
1M63	2422 025 09405	Connector 2p m
1M64	2422 025 10769	Connector 9p m



2102	4822 124 81151	22μF 50V
2103	2238 916 15641	22nF 10% 25V 0603
2109	3198 017 34730	47nF 16V 0603
2129	5322 126 11578	1nF 10% 50V 0603
2131	2238 586 15641	22nF 10% 50V 0603
2132	4822 124 40207	100μF 20% 25V
2140	4822 124 40248	10μF 20% 63V
2141	4822 126 14583	470nF 10% 16V 0805
2145	4822 126 14583	470nF 10% 16V 0805
2152	4822 121 70162	10nF 5% 400V
2154	3198 017 31530	15nF 20% 50V 0603
2160	4822 124 21913	1μF 20% 63V
2163	4822 124 81151	22μF 50V
2506▲	2022 554 04155	470pF 20% 250V
2507	4822 126 13682	100pF 5% 1kV
2508	4822 124 40764	22μF 100V
2510	2020 021 91668	2200μF 20% 10V
2511	4822 124 12379	220μF 25V
2513	2222 930 56627	2.2nF 10% 200V 0805
2533	4822 124 40207	100μF 20% 25V
2534	2022 552 05679	1μF 10% 16V 0805
2535	5322 126 11583	10nF 10% 50V 0603
2536	5322 126 11583	10nF 10% 50V 0603
2537	4822 126 14238	2.2nF 50V 0603
2538	2020 552 96683	220nF 10% 50V
2539	2022 552 05679	1μF 10% 16V 0805



3104	3198 039 22090	22Ω 1%
3106	4822 051 30333	33kΩ 5% 0.062W
3108	2322 193 14477	0.47Ω 5%
3110	4822 117 12864	82kΩ 5% 0.6W
3112	4822 051 30102	1kΩ 5% 0.062W
3113	5322 117 13053	6.8kΩ 1% 0.063W 0603
3122	4822 051 30471	47Ω 5% 0.062W
3123	5322 117 13053	6.8kΩ 1% 0.063W 0603
3124	3198 021 32290	22Ω 5% 0603
3125	4822 051 30471	47Ω 5% 0.062W
3126	4822 117 13632	100kΩ 1% 0603 0.62W
3127	4822 117 13613	2.2Ω 5% 0603
3128	4822 051 30153	15kΩ 5% 0.062W
3132	4822 051 30333	33kΩ 5% 0.062W
3134	4822 051 30102	1kΩ 5% 0.062W
3135	4822 051 30331	330Ω 5% 0.062W
3140	4822 117 12925	47kΩ 1% 0.063W 0603
3141	4822 051 30471	47Ω 5% 0.062W
3146	4822 051 30472	4.7Ω 5% 0.062W
3148	4822 051 30333	33kΩ 5% 0.062W
3149	4822 051 30474	470kΩ 5% 0.062W
3152	4822 051 30471	47Ω 5% 0.062W
3153	4822 117 12925	47kΩ 1% 0.063W 0603
3159	4822 051 30479	47Ω 5% 0.062W
3160	4822 051 30123	12kΩ 5% 0.1W
3161	4822 051 30123	12kΩ 5% 0.1W
3171	4822 051 30101	100Ω 5% 0.062W
3172	4822 051 30333	33kΩ 5% 0.062W
3175	4822 051 30103	10kΩ 5% 0.062W
3176	4822 051 30103	10kΩ 5% 0.062W
3511	4822 051 30683	68kΩ 5% 0.062W
3512	4822 051 30471	47Ω 5% 0.062W
3513	4822 051 30333	33kΩ 5% 0.062W
3528	4822 051 30472	4.7Ω 5% 0.062W
3529	4822 051 30101	100Ω 5% 0.062W
3531	4822 051 30153	15kΩ 5% 0.062W
3532	4822 051 30223	22kΩ 5% 0.062W
3534	4822 051 30102	1kΩ 5% 0.062W
3535	4822 051 30102	1kΩ 5% 0.062W
3536	4822 051 30102	1kΩ 5% 0.062W
3538	4822 051 30101	100Ω 5% 0.062W
3539	4822 051 30221	220Ω 5% 0.062W
3543	4822 051 30223	22kΩ 5% 0.062W
3560	4822 051 30682	6.8Ω 5% 0.062W
3561	4822 051 30392	3.9Ω 5% 0.063W 0603
3562	3198 021 34780	4.7Ω 5% 0603
3999	4822 051 30682	6.8Ω 5% 0.062W



5103	4822 526 10704	Bead 50 Ω at 100MHz
5104	4822 157 11411	Bead 80Ω at 100MHz
5105	2422 549 43769	Bead 30Ω at 100MHz
5106	4822 157 50961	22μH
5107	2422 549 42896	Bead 120Ω 100MHz
5110	4822 157 71736	10μH 5%
5500▲	2422 531 00076	BS25412-01 B
5504	2422 536 00776	33μH 10%
5505	4822 157 11411	Bead 80Ω at 100MHz
5506	4822 157 11411	Bead 80Ω at 100MHz
5507	2422 536 00433	15μH 10%
5508▲	4822 157 11832	400UH 3A



6101	9322 099 61685	BYG10J
6102	4822 130 11397	BAS316
6103	5322 130 31938	BYV27-200
6105	4822 130 11522	UDZ15B
6107	4822 130 11572	STPS8H100F
6115	4822 130 11522	UDZ15B
6130	9322 129 41685	BZM55-C12
6132	4822 130 11416	PDZ6.8B
6133	4822 130 11397	BAS316
6134	4822 130 11397	BAS316
6140	4822 130 83755	BYW36
6144	4822 130 11397	BAS316
6148	4822 130 11397	BAS316
6149	3198 020 55680	BZX384-C5V6
6504	9322 203 12673	BYV27-600
6531	4822 130 11522	UDZ15B
6532	4822 130 11397	BAS316
6534	9340 548 47115	PDZ3.3B
6562	9340 548 67115	PDZ22B



7100	9352 700 18518	TEA1533AT/N1
7101	9340 219 30115	BC817-25W

7102	9322 206 17687	FET STP4NK80ZFP
7131	9340 557 69127	PHX9NQ20T
7140	3198 010 42310	BC847BW
7501▲	9322 149 04682	TCET1102
7506	3198 010 42310	BC847BW
7507	3198 010 42310	BC847BW
7511	9322 192 16685	TS2431AI
7531	9340 436 50115	BSP030
7532	3198 010 42310	BC847BW
7534	3198 010 42320	BC857BW
7560	9340 219 30115	BC817-25W

11. Revision List

Manual xxxx xxx xxxx.0

- First release.